BULLETIN

OF THE

TORREY BOTANICAL CLUB.

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§ **68 Regel on the Species of Vitis.**—E. Regel, in Garten Flora ; for July 28, 1873, publishes a revision of the species of Vitis from North America, Northern China and Japan. Our grapes have always been a puzzle to botanists, and it may interest the readers of THE BULLETIN to see what disposition has been made of our species by one who studies them in comparison with those from countries nearly related botanically.

Taking the species as they are enumerated in Torr. & Gray's Fl. N. Amer., I give in brief Regel's views of them.

V. bipinnata, Torr. & Gray's Fl., I., p. 243, he has as *V. arborea*, Linn.

V. incisa, Nutt., in Torr. & Gray, is left undisturbed.

V. indivisa, Willd., is placed as *V. heterophylla*, var. *α, cordata.*

V. Labrusca, in its many forms, is disposed of in three varieties: *α, typica, β, æstvalis* and *γ, lanata*, the first two of which have several sub-varieties. In his arrangement *V. candicans*, Englmn., in Smithson. Contrib. III., 5, p. 32, and *V. mustangensis*, Buckl., in Proc. Phil. Acad., 1861, p. 451, would both be *V. Labrusca α, typica*, c, ficifolia, and our *V. æstivalis* Michx.; Torr. & Gray, is *V. Labrusca, β, æstivalis.*

V. æstivalis, Michx; Torr. & Gray: See *V. Labrusca.*

V. cordifolia, Michx: Torr. & Gray: See *V. vulpina.*

V. riparia, Michx.; Torr. & Gray, was by Dr. Gray in his Manual reduced to a variety of *V. cordifolia*, and Regel has it as *V. vulpina, ε, riparia.*

V. vulpina, Linn.; Torr. & Gray, Regel makes four varities, his var. *α, rotundifolia* includes our *V. vulpina*, and our *V. cordifolia* is his var. *β.*

The following is Regel's conspectus of our species, which will serve to show, in brief, the characters upon which his classification is based:

A. Inflorescence cymose, Petals spreading in flower, soon deciduous.

a. Cymes from opposite the leaves from the shoots of the current year.

* Leaves pinnate or pinnately compound.

1. **Vitis arborea,** L.

** Lower leaves three-lobed, upper three-foliolate.

2. **Vitis incisa,** Nutt.

*** Leaves entire or palmately lobed.

3. **Vitis heterophylla,** Thunb.

b. Cymes from the branches of previous years.

4. **Vitis inconstans,** Mig. (Japan and Himalayan sp.)

B. Inflorescence thyrsoid, paniculate or rarely racemose; petals cohering into a calyptra which falls at flowering.

a. Leaves more or less hirsute on the veins below, or rarely all smooth.

5. **Vitis vulpina,** L.

b. Leaves all, or at least the younger, densely tomentose on the lower surface.

6. **Vitis Labrusca,** L.

The wonderful tendency of our vines to vary under cultivation seems to belong to them in the wild state, and one who has but a small suite of specimens is likely to be much more positive in his determinations than those who have collections made from widely-separated localities.

Since the above was in type we learn from a note in the *Gardener's Chronicle* that Dr. Regel considers *Vitis vinifera* to be a hybrid between *V. Labrusca* and *V. vulpina*. He bases this opinion upon the fact that *V. vinifera* is not found in a truly wild state, but only as an escape from cultivation, and that these species are natives of the countries where the cultivated grape originated. It may be remembered that our grape growers who have experimented in the production of hybrids have found *V. vulpina* the most intractable of all in this respect.

G. T.

§ **69 Two New Fungi from New Jersey.**—Some time ago Mr. J. C. Martindale sent me specimens of the common dodder, *Cuscuta Gronovii* Willd. that were much hypertrophied. Whole clusters of the flowers were swollen and elongated and parts of the stems were much enlarged. The affected clusters were of a paler color than the unaffected, though in some cases the process of decay had advanced so far that the diseased plants had become dark-colored and were supporting a crop of that almost omnipresent blackish mold, *Cladosporium herbarum* Lk. The inner tissues of the affected plants were all broken up, or destroyed, and the cavities filled by innumerable fungus spores, which in the mass were of a whitish color, but under the microscope were seen to consist of a pale or yellowish endochrome surrounded by a thick hyaline epispore. Here was the secret of the strange appearance of the dodder. It was nourishing a parasite within itself that was preying upon its vitals. I do not find the epidermis ruptured in any of the specimens, from which it is probable that the fungus spores must wait for their liberation and dissemination till the decay of the enclosing walls of their habitation takes place. This fungus is referable to the genus *Protomyces*, but is peculiar by reason of the abundant formation of spores in *all parts* of the affected plant.

Deeming it a new species, I take great pleasure in dedicating it to its discoverer.

Protomyces Martindalei *Pk.*—Host plant swollen, slightly discolored; spores abundant, produced in all parts of the host plant, always covered, globose, whitish in the mass, .0006—.0007 inch in diameter, epispore thick, hyaline.

Hab. *Cuscuta Gronovii* Willd. Near Camden, New Jersey, Autumn.

Another scarcely less interesting fungus has been received from Mr. J. B. Ellis. It is a Rœstelia on the leaves of *Pyrus arbutifolia* L. It is remarkable for its effect upon the leaf tissues, forming them into a much thickened and peculiar subiculum, and, in the language of Mr. Ellis, "often transforming a leaf into a tubercular mass after the manner of Podisoma on the red cedar." This subiculum is composed of crowded subcylindrical or cornute projections united at the base in a common mass, each one bearing a single peridium at its apex. I suspect that these projections may be less prominent in fresh specimens. They are strongly suggestive, by their form not their texture, of the elongated peridia of *Rœstelia cornuta* Tul., while the true peridia, that surmount them, are lacerated into such fine filaments as to be suggestive of the peristomal fringe seen on the capsules of some species of Barbula. I do not find this fungus described and, from the notes of Mr. Ellis and an examination of the dried specimens, have drawn up a description under the very appropriate name given by its discoverer.

Rœstelia transformans Ellis. — Spots red; subiculum much thickened, produced into tufts of crowded subcylindrical or cornute processes, red or brownish, sometimes transforming an entire leaf; peridia at the apices of the projections of the subiculum, finely lacerated, whitish, the cells linear, minutely papillose; spores subglobose, minutely roughened, brownish, .00065—.00075 inch in diameter.

Hab. Leaves of *Pyrus arbutifolia* L. Newfield, New Jersey. October. C. H. Peck.

§ 70. **New Fungi,** by E. C. Howe, Yonkers, N. Y.

1. **Puccinia curtipes,** n. sp.—Spots pallid or brownish; sori scattered, more or less confluent, roundish or oblong, surrounded by the broken epidermis. Spores light brown, elliptical apiculate, usually marked with delicate striæ. Pedicels short or wanting. Both sides of the leaves of *Saxifraga.*—May. June.

2. **Uromyces Peltandræ,** n. sp.—Spots yellowish brown; sori scattered, sometimes confluent, roundish or oblong; spores yellowish brown, oblong elliptical or subglobose, apiculate or tipped with an umbo. Pedicels short, often rudimentary but always present. Leaves of *Peltandra.*—Summer and Autumn.

3. **Podosphæria minor,** n.sp.—Conceptacles scattered or crowded; appendages 10–20, as long or a little longer than the diameter of the conceptacles. Leaves of *Spiræa.*—Oct.

4. **Microsphæria Symphoricarpi,** n. sp.—Mycelium effused, subpersistent; conceptacles scattered or crowded; appendages 8–16, 2-4 times the length of the diameter of the conceptacles, 3–5 times dichotomous, ramuli divaricate, tips variable, often truncate, never curved, sporangia 4–6 with 3–5 spores. Leaves of *Symphoricarpus.* Nov.

5. **Microsphæria Menispermi,** n. sp.—Mycelium webby, effused, often evanescent; conceptacles scattered or gregarious, minute,

globose; appendages 10-20, about as long as the diameter of the conceptacles; sporangio 5–6 with 3-6spores. Leaves of *Menispermum*. Oct.—Related to *M. Alni* by its bicornute ramuli.

6. **Microsphæria Platani,** s. p.—Mycelium evanescent; conceptacles minute, globose, scattered; appendages 10–18, longer than the diameter of the conceptacles, tips of the ramuli strougly curved; sporangia 4–5 with 4–5 spores. Leaves of *Platanus*. Oct.—A distinct and beautiful species.

7. **Uncinula heliciformis,** n. sp.—Mycelium obscure; conceptacles scattered, minute, globose; appendages 15–30, once or twice the length of the diameter of the conceptacles, spirally coiled above, colored at base; sporangia 4–6 with 3–6 spores. Leaves of *Populus balsamifera*.—Oct.

§ 71. **Catalogue of Suffolk Co. Plants.**—Mr. E. S. Miller, of Wading River, and Mr. H. W. Young, Aquebogue P. O., Suffolk Co., N. Y., the enterprising and sagacious young botanists of the eastern end of Long Island, have here collected a list of 871 species of plants found in what is not usually considered a fertile portion of the State. More than nine-tenths of these have been collected by themselves within the last two or three years, and such is their activity that we have no doubt that they will continue to add largely to the number for some years to come, especially as there are many plants not yet on the list which might be expected to occur, as, to take for example a lacuna which presents itself in the very first order, *Actæa* and *Cimicifuga*, the former of which we are tolerably sure of having found at Miller's Place not very far from Wading River, while Cimicifuga abounds on this end of Long Island. On the other hand, they find quite a number of species never before found in the State, or very rarely, and some Southern forms. The latest discovery we believe is that by Mr. Miller of *Bromus tectorum*, L., a European grass never before reported in this country. Those who would like to study this Catalogue can obtain it from either of the editors for ten cents. We notice an error in the title, as the list does not include all the acrogenous species, ending with Lycopodiaceæ and omitting the Muscal Alliance.

§ 72. **Botanical Directory.**]

ADDITIONS.

Bibbins, R. K. Plattville, Kendall Co., Ill.
Briggs, S. A., Englewood, Ill. *Diatomaceae.*
Clarke, Mrs. —, Jamaica Plain, Mass.
Hadaway, Mr. —, Stony Brook, Suffolk Co., N. Y.
Mill, C. P., Estonville, Philadelphia, Pa.
Miller, F. A. (Miller & Sievers), San Francisco, Cal.
Munroe, H. F., 781, W. Jackson St., Chicago, Ill.
Page, Miss Ann L., Danvers, Mass.
Putnam, C. A., Salem, Mass. *Cult.*
Putnam, Francis, Salem, Mass. *Cult.*
Sears, J. H., Danvers, Mass. *Spec. Trees.*

CORRECTIONS.

Bebb, M. S., Ill. *Spec. Cult. Salices.*
Babcock, H. H., 11, 18th St., Chicago, Ill.
Darby, Dr, John, Millersburg, Ky.
Errington, Miss H. N., Clifton, Richmond Co., N. Y. *Spec. Californian.*
Errington, Miss G., N. Y. *Spec. Staten Island.*
Fuller, Chas. B., Me. *Marine Algae.*
Gillman, Henry, 80, Elizabeth St. West—not West Detroit.
Howland, Mrs. Francis, Englewood, N. J.
Johnson, Dr. H. A., Ill. Not active.
Knighton, Rev. Dr. Frederick, Cranbury, N. J.
Lyons, Dr. A. B., 54, Fort Street West—not W. Detroit.
Parker, Chas. F., 524, N. 2d St., Camden, N. J.
Putnam, F. W., not a botanist, but the name is kept in on account of the *Naturalists' Agency* which is of interest to botanists.
Rauch, Dr. J. H., Ill. Not active.
Smith, Dr. George, Darby, Delaware Co., Pa.
Tatnall, Ed., Del.
Warne, H. A., Oneida, N. Y.

§ 73. **New Localities.**—Miss Mary C. Reynolds reports having found *Lygodium palmatum*, Swartz, the last season, in Hunter Greene Co., N. Y. We have not heard of any other locality in our State. Mr. I. H. Hall sends us a specimen of *Gentiana Saponaria*, L., from Cresskill, N. J., a species new to our catalogue.

§ 74. Additions to the Bryology of the United States, by Chas. Mohr.

NO. I.

Notes on the Bryology of Oregon, with description of two new species, by Prof. Dr. KARL MUELLER, Halle.

THE mosses of Oregon are yet but little known, and the amount of our knowledge appears still smaller when compared with the great progress made in the last ten years regarding the bryological flora of California, chiefly due to the zeal of Mr. Bolander and the researches of Prof. Lesquereux. By them an entirely new botanical region has been laid open, full of the highest interest, not only from the acquisition of manifold new forms, but also from the development of important and peculiar facts relating to the distribution of species on this continent. What has been brought to light from Oregon has also added much to our knowledge of the mosses of the western coast of the United States, and points to a field promising rich rewards to the investigator in the discovery of forms not only new to this country, but new to science, and characteristic of that part of the Pacific region.

Notwithstanding the large preponderance of species Oregon has in common with Europe and the number of exclusively northwestern species it shares with other parts of the Pacific coast, every collector since the time of Menzies has made additions of new forms, many peculiar to that State, and much more is to be expected from the efforts of future explorers. This has been evinced anew by the discovery of three new species in a small collection of mosses made by the Rev. R. D. Nevius, near Portland, Oregon. I handed the same over to Dr. K. Mueller, for examination, and he had the kindness to send me the manuscript of his description of two of the same, to be published in one of our journals. The description of the third he has deferred until the arrival of more perfect specimens. Recognizing it, undoubtedly, as a proper species, he called it Hypnum *pseudo-sericeum*.

1. **Mnium** (*Eumnium*) **Nevii**, C. Müller, *n. sp.* Hermaphroditum, cæspites laxi inferne fusco-tomentosi subhumiles; *caulis simplex* inferne fusco-radiculosus gracilis, *apice clavato* solum imbricato-foliosus virescens; *folia caulina erecto-conferta regulariter se tegentia crispatula vel margine undulata*, madore reflexo-patula et carnosula, e basi decurrente serie cellularum angustarum unica formata breviter cuneata late ovata vel orbiculata, acumine brevi acuto plerumque reflexo terminata, *dentibus elongatis plus minus erectis vel reflexis ciliformibus fimbriata*, nervo in aristulam excedente, cellulis ubique parvis hexagonis regularibus viridissimis chlorophyllosis, limbo lato flavido; perich. pauca parva lanceolato-acuminata inte-

gerrima, limbo e cellularum serie unica efformato apice solum cincta, e cellulis elongatis laxis apice hexagonis paucis densioribus reticulata; thecæ in pedunculis flavidis flexuosis pendulæ cylindraceo—oblongæ basi incrassatæ; peristomium normale. Opercula et calyptræ ignota.

Patria.—Portland, Oregon, vere 1873, Rev. Dr. R. D. Nevius.

Notis accuratius designatis primo visu cognoscendum. *Mn. cuspidatum* affine facile distinguitur; ramis sterilibus reptantibus, fertilibus laxe et valde patule foliosis, foliis tenuissime limbatis breviter dentatis fructibusque turgide ovalibus.

NOTE. Lately a few fine specimens with operculate capsules not quite matured have arrived which admit the following description of the operculum: *Operculo hemispherico-conico*, mamillato, pallide flavido ore aurantiaco annullato, (C. Mohr)—thus giving the description complete in all essential parts.

2. Grimmia (*Dryptodon*) **Nevii**, C. Müller, *n. sp.* Dioica laxe cæspitosa atro-viridis vel nigricans; caulis *longiusculus gracilis inferne foliis difractis nudiusculus*, per innovationem parce et breviter ramulosus, *ramulis supremis incurvulis* foliosis; *folia caulina* appresso imbricata vel parum patula, e basi parum decurrente oblonga *late ligulacea obtusata*, valde concava, *margine* infero plus minus revoluto integerrima, *apiculi dentibus nonnullis remotis brevibus angulate eroso-denticulata*, nervo latiusculo canaliculato in strias veluti dissoluto ante apicem evanido percursa, e cellulis carnosulis viridissimis parietibus undulatis instructis quadratis papillosis chlorophyllosis areolata; perich. semivaginantia oblongo-lanceolata acuminata integerrima plicatula, exteriora evanidinervia, interiora enervia, omnia valde concava e cellulis tenuibus pellucidis rectangularibus angustis reticulata; *theca in pedunculo brevissimo curvulo majuscula ovalis badia submacrostoma, dentibus obtusis rubris levibus in crura duo cohærentia fissis crasse articulatis carnosulis.* Cætera ignota.

Patria.—Portland, Oregon, vere 1873, Rev. Dr. R. D. Nevius.

Planta mascula foemineæ simillima, andrœciis nonnullis turgidis coloratis secus caulem dispositis, antheridiis magnis clavatis eparaphysatis, foliis perigonialibus e basi late ovata laxe reticulata aurantiaca breviter oblongis vel ligulaceo—obtusatis angulate denticulatis, interioribus brevissime acuminatis obtusiusculis integris, omnibus evanidinervibus. Quoad foliorum formam *Grimmiæ aciculari* affinissima, sub hæc species primo intuito differt: pedunculo elongato cellulisque foliorum dolioliforme-rotundis.

Scanty as the material at our command is, at this day, for exhibiting the features of the bryological flora of Oregon, it will not be without interest to trace the same as far as it is possible, by the data which the valuable *Catalogue of Pacific Coast Mosses*, by Prof. Lesquereux, offers.* One of its most striking and prominent characters is its close relation to the bryology of Europe; another, not less remarkable, is the almost total want of connection with the Eastern part of this continent. The absence of

* Memoirs of California Academy of Science, Vol. I, Part 1.

any exclusively Eastern North American genus and the scarcity of species typical of that region in Western North America, have, years ago, been pointed out by the above author as one of the most curious and interesting facts relating to the geographical distribution of mosses on this continent.*

Two species of Hypnum, *H. orthocladum* and *H. lætum*, are known at present as the sole representatives of typical Eastern North American forms.

According to the enumerations in that work, of the two hundred and sixty-five species known from the Pacific coast of North America, one hundred and twenty-two are mentioned as having been found in Oregon. Included are those collected in Vancouver's Island (which is to be considered within the limits of the same botanical province) by Lyall, and the few species from the British possessions by the older English collectors, which may safely be expected to be met with in the mountainous and northern parts of the State. Adding the *Fontinalis antepyretica*, var. *Neo Mexicana*, Sulliv and Lesq., lately found by Dr. Barret in the Hood river, O., and the three new species introduced here, the whole number of species known at present from Oregon would be one hundred and twenty-six (eighty-four acrocarpous and forty-two pleurocarpous). Of this number, eighty-six, or nearly seventy per cent., are European species (sixty-seven acrocarpici and twenty pleurocarpici). Fifty-three of the same are also common in Eastern North America, mostly of a wide distribution in the temperate and colder zones of the globe. Eighteen are common to Europe and California, and fifteen European species have yet been found on this continent solely in Oregon, the greatest part typical European forms belonging to the more temperate zones of Europe, as, *v. i.*: *Dicranum albicans*, *D. strictum*, *Leptotrichum flexicaule*, *Barbula princeps* (*B. Mulleri*, *Brch*), *Tayloria serrata*, *Bryum longicollum and Mnium medium.*

The number of exclusively Western North American species is *thirty-seven*, or thirty per cent (sixteen acrocarpous and twenty-one pleurocarpous).

Of these, the following nineteen can be regarded as peculiar to the moss flora of Oregon. *Barbula rubiginosa*, *Grimia* (Dryplodon) *Nevii* (inter Racomitrium). *Zygodon cæspitosa* from Vancouver Island, *Orthotrichum consimile and O. Columbianum* from the same locality, *Mnium Nevii*, *Bryum Oreganum*, *Dichelyma uncinatum*, *Hookeria anomala*, *Hypnum laxifolium H. reniolifolium*, H. apocladum, H. lentum, H. declivum, H. Oreganum, H. turfaceum, H. robustum, H. collinum, Schw. (sterile from California) H. pseudo-sericeum, *n. sp.*, C. Müll.

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* Transactions of the American Philosophical Society, Phila., June, 1862.

The following table will exhibit the distribution of the mosses found in Oregon more clearly:

Genera found in Oregon with number of Species in each Genus.	In comm'n with Europe, 86 Species.			Ex. W. N. American, 38 Spec.				
	Europe and E. N. Amer.	Europe and N. W. Am. exclusive of Oregon.	Europe and Oregon.	With Eastern North America exclusively, 2 Species.	Oregon and other W. N. America.	Oregon.		
1. Weissia.....2	1	1						
2. Dieranum.....10	5	2	3					
3. Fissidens.....1	1							
4. Pottia.....1			1					
5. Ceratodon.....1	1							
6. Leptotrichum.....1			1					
7. Trichostomum.....2		1			1			
8. Distichium.....1	1							
9. Desmatodon.....1		1						
10. Barbula.....4	1	2				1		
11. Grimmia.....6	2	2	1		1			
12. Racomitrium.....5	2	1	1			1		
13. Hedwigia.....1	1				1			
14. Braunia.....1								
15. Zygodon.....2	1					1	Acrocarpous.	84
16. Ulota.....1			1					
17. Orthrichum.....5	1	2				2		
18. Tetraphis.....1	1							
19. Eucalypta.....2	2							
20. Tayloria.....1			1					
21. Funaria.....1	1							
22. Mnium.....6	1		1		3	1		
23. Bryum.....14	9	3	1			1		
24. Aulacomnium.....2	2							
25. Meesia.....2	2							
26. Bartramia.....3	2				1			
27. Timmia.....1	1							
28. Atrychum.....1	1							
29. Pogonatum.....2					2			
30. Polytrichadelphus..1					1			
31. Polytrichum.....2	2							
32. Fontinalis.....1	1							
33. Dichelyma.....1						1		
34. Neckera.....2					2			
35. Alsia.....2					2			
36. Antitrichia.....1	1							
37. Hookeria.....1						1		
38. Hypnum.....34	10	3	4	2	5	10	Pleurocarpous.	42
Whole number of Species.....126	53	18	15	2	19	19		126

† Trichostomum corniculatum found also in Kamtchatka.

‡ B. rubiginosa N. W. America, by Douglas.

Terms—*One Dollar per annum beginning with the January number. For the Botanical Directory alone, 30 cents. Back volumes on hand.*

Local Herbarium, 3, E. 33d St.—Editor, 224, E. 10th St.

The Club meets regularly the last Tuesday of the month in the Herbarium, Columbia College, at 7½ P.M.

§ 75. **Variations.**—I saw in the Bulletin a notice of an Iris which changed its color. I have in my little garden a root of *I. Germanica*, a *fleur-de-lis* of the white variety. There are no blue ones in the neighborhood that I know. Four years ago one of the outer divisions of the perianth of one flower was dark blue. The next year one whole flower was dark blue, two other flowers on the same stalk were white. In the following year all the flowers on one stalk were blue, and all the flowers on the other stalks white. This year it bore only white flowers.

I am led to question the permanence of single variations (but not the permanence of the *forms* of variation) from having been unable to procure the same variety for two seasons in succession in the same place. For instance, our common Sensitive Fern varies into var. *obtusilobata*, but the variation is not permanent. I often find it, and once found a large bed of it, in every possible intermediate form. The next year going to look for some Adder-tongue ferns growing near, I looked carefully for the *obtusilobata*, but not one appeared. Some remarkable variations of *Aspidium acrostichoides* I have found the second year perfect forms of our finest evergreen fern. The Adder-tongue fern too varies very much. On the high cold sand plains of North Elba it is two or three inches high and perfectly orbicular. In Elizabethtown, Essex County, I found it ten inches high, ovate and very fine. Here it is quite plenty in swamps and pastures, but is so slender and acute as to be difficult of detection among the grass. L. A. M.

§ 76. **Apocynum.**—I have been much interested in your notes on Apocynum. It grows abundantly about us and I have made it a point to observe it. I have repeatedly found insects caught by the flowers, mostly small coleoptera; they were all dead when I observed them. The flowers are visited by the common rose beetle among other insects. This beetle is very destructive to many of our wild flowers this year—the Azalea viscosa, Ceanothus Americana, and Pogonia ophioglossoides being all subject to its ravages. In reading Darwin's "Loves of the Flowers" I find the following, which may be of interest in the above connection. "In the Apocy-
"num androsæmifolium the anthers converge over the nectaries,
"which consist of five glandular oval corpuscles surrounding the
"germ, and at the same time admit air to the nectaries at the inter-
"stices between each anther. But when a fly inserts its proboscis
"between these anthers to plunder the honey, they converge closer,
"and with such violence as to detain the fly, which thus generally
"perishes. This account was related to me by R. W. Darwin, Esq.,
"of Elston, in Nottinghamshire, who showed me the plant in flower,
"July 2d, 1788, with a fly thus held fast by the end of its proboscis,
"as was well seen by a magnifying lens, and which in vain repeated-
"ly struggled to disengage itself, till the converging anthers were
"separated by means of a pin; on some days he had observed that
"almost every flower of this elegant plant had a fly in it thus en-
"tangled; and a few weeks afterwards favored me with his further
"observations on this subject.

"'My Apocynum is not yet out of flower. I have often visited it

"and have frequently found four or five flies, some alive, and some "dead, in its flowers; they are generally caught by the trunk or "proboscis, sometimes by the trunk and a leg; there is one at pres- "ent only caught by a leg; I don't know that this plant sleeps, as "the flowers remain open in the night; yet the flies frequently make "their escape. In a plant of Mr. Ordoyno's, an ingenious gardener "at Newark who is possessed of a great collection of plants, I saw "many flowers of an Apocynum with three dead flies in each; they "are a thin bodied fly, and rather less than the common house-fly; "but I have seen two or three other sorts of flies thus arrested by the plant, August 12, 1788'." W. W. BAILEY.

PROVIDENCE, R. I.

§ 77. **Sandwich Island Mosses.**—Collected by H. MANN and W. T. BRIGHAM. Named by W. S. SULLIVANT, (May, 1872.)

1. **Dicranella exilis,** (*n. sp.*)—Caule 2-3 lineari, foliis erecto-patentibus rigidis ex ovato longe sensim anguste acuminatis, cellulis oblongis uniformibus lævibus, costa lata ad apicem et ultra continua, capsula erecta oblongo-elliptica, operculo æquilongo obliquo, annulo speciosa, pedicello 3-lineari, peristomio dicranoideo, calyptra generis.—Kuala Mountains, Oahu.

2. **Dicranum præmorsum** (*n. sp.*)—Robustum elatum tomentoso-contextum; foliis erecto patentibus longe lineali-lanceolatis convolutis apice extremo lobato-truncatis ibidemque grossius serratis, cellulis angustis interruptis, illis alaribus subquadratis brunneis, costa tenui subindistincta dorso superne lenissime serrata, perichætialibus alte vaginantibus filiformi-acuminatis, capsula elongato-cylindracea erecta stricta leniterve curvula, operculo subulato-rostrato, peristomio et calyptra generis.—Mountains of West Maui.

3. **Trematodon longicollis,** *Rich.*—Waiulua Mountains, Oahu.

4. **Campylopus flexuosus,** var:—valleys of West Maui.

5. **Campylopus exasperatus,** *Brid.*—Highlands of Hawaii.

6. **Ceratodon purpureus,** *Brid.*—Hualalui, Hawaii, 6,000 ft. alt.

7. **Leucobryum gracile** (*n. sp.*)—A *Leucobryo minore* simillimo distinctum foliis paulo minoribus, pedicellis graciloribus longioribus, capsulis brevioribus magis cernuis distinctius strumosis, etc.—Woods, Oahu.

8. **Leucobryum falcatum,** *C. Müll*—Oahu.

9. **Encalypta ciliata,** *Hedw.*—Hualului, Hawaii, 6,000 ft. alt.

10. **Racomitrium lanuginosum,** var.—Mauna Loa, Hawaii 5.000-1,300 ft. alt.

11. **Macromitrium Reinwardtii,** *Schwgr.*—Woods, Oahu.

12. **Macromitrium piliferum,** *Schwgr.*—On rocks, Oahu.

13. **Funaria hygrometrica.** *Hedw.*—Hualului, Hawaii, 6,000 ft. alt.

14. **Bartramia rigida,** var.—Woods, Hilo, Hawaii.

15. **Bartramia Marchica,** var.—Caulibus ramulisque minus gracilibus, foliis oblongioribus citius acutatis, costa vix excurrente, pedicello breviore, etc.

16. **Bryum argenteum,** *Linn.*—Hualulai, Hawaii, 6,000 ft. alt.

17. **Mnium giganteum,** *Sshwgr.*—Oahu!

18. **Rhizogonium spiniforme,** *Bruch.*—Woods, Hilo, Hawaii.

19. **Rhizogonium spiniforme,** var. foliis brevioribus, etc.

20. **Rhizogonium spiniforme,** var. elatum ?—Woods, Oahu.
21. **Rhacopilum tomentosum,** *Brid* —Woods, Oahu.
22. **Rhacopilum tomentosum,** var.? an species nova.—Woods, Kona, Hawaii.
23. **Mniadelphus paradoxus,** *C. Müll.*—Oahu.
24. **Meteorium trichophorum,** *Mont*—Woods, Oahu.
25. **Meteorium illicebrum,** *Nees.*—Hawaii.
26. **Neckera dendroides,** *Hook.*—Oahu.
27. **Hypnum plumosum,** *Linn.*—Hualui, Kauai.
28. **Hypnum gracilisetum,** *Hoh. & R.*—Oahu.
29. **Hypnum pungens,** *Hedw.*—Kona, Huanai, Oahu.
30. **Hypnum Bonplandii,** *Hook. ?*—Oahu.
31. **Hypum Draytoni,** *Sulliv.*
32. **Hypum Wilkesianum,** *Sulliv.*—Oahu.
33. **Hypnum paucipilum** (*n. sp.*)—Dioicum *minusculum* delicatulum nitidum; caule repente pinnato, foliis oblongo-lanceolatis longe filiformi-attenuatis decurvo-falcatis tenuissimis, a medio ad apicem serratis basi brevissime bicostellatis, cellulis angustissimis, alaribus 2–3 utrinque vesiculiformibus, perichaetialibus erectis, capsula oblonga annulata horizontali, pedicello gracilescente, operculo longe rostrato, calyptra cuculliformi pilis paucis longis conspersa.—Oahu.
34. **Hypnum Pickeringii,** *Sulliv.*—Oahu.
35. **Hypnum molliculum,** *Sulliv.*—Oahu.
36. **Hypnum apertum,** *Sulliv.*
37. **Thuidium cymbifolium,** *D. & Mlk.*—Woods, Kona, Hawaii.
38. **Thuidium delicatulum,** *Hedw.*

§ **78. New Publications.**—1. *Flora Fossile dell' Etna,* per Francesco Tornabene, Casinese Professore di Botanica alla Regia Universita di Catania, ed ivi Direttore del R. Orto Botanico. Catania, 1859. Small quarto, pp. 147, with 10 lithographic plates. Presented to the Club by Dr. C. H. F. Peters, director of the Litchfield Observatory of Hamilton College (and, by the way, the original copy presented to Dr. Peters by the author). This is an account, principally in Italian, of the fossil flora of Mt. Etna, the technical descriptions of the plants and of the plates being in Latin; with an introduction setting forth the general scope of the work, a preliminary chapter on the origin of the rocks and earths, and another interesting chapter on the botanical stations and distribution of plants on the mountain; and on the process of formation of the fossil flora. A general abstract of these introductory chapters would be very instructive, if space would permit.

The author accompanies his descriptions of the fossil plants with observations upon the kindred living species, and seems to have neglected no source of information regarding his subject, drawing largely upon the observations of foreign travelers and geologists.

Naturally the fossil flora on the sides of a still active volcano differs materially from that of old extinct terrains; as the deposits of lava, stones and ashes on its slopes suffer such varied disintegrations, and allow such multiplied effects to be produced by the

percolations of water. Consequently, much of the fossil flora has both near relatives and living representatives.

Among the fossil plants enumerated are *Pistacia Terebinthus*, L., and var. *ovalifolia*, Tornabene, *P. lentiscus*, L., *P. Sicula*, Tornabene, *P. Bossoni*, Tornabene, *Prunus spinosa*, Duhamel, *Rubus Dalmaticus*, Tratt (*R. fruticosus*, var. *Dalmaticus*, De Candolle et auctores alteri), *R. tomentosus*, Willd., *Pyrus communis*, L., *Myrtus communis*, L., and var. *Italica*, L., var. *Romana*, L., *M. latifolia*, Tornabene; *Vitex agnus-castus*, L., and var. *latifolia*, Tornabene; *Laurus nobilis*, L.

2. *The Circulation of Sap in Plants*, by W. S. Clark, Pres. Mass. Agric. Coll., Boston, 1874. This lecture was noticed in our Dec. No. It is now published in pamphlet form, with fuller details.

3. *The Flora of Chicago and Vicinity. Supplementary.* H. H. Babcock, reprinted from the *Lens*; about fifty additional species or varieties are here added, the most interesting of which are the willows, particularly *S. cordata*, var. *glaucophylla*, and *S. adenophylla*, Hook.

4. Schedule of Prizes offered by the Mass. Hort. Soc., for the year 1874, Boston.

5. *The Eclectic Ruralist*, Vol. II., No. 1. Rochester, February, 1874.

6. Mr. George C. Woolson, 245, Broadway, N. Y., has had printed for his own convenience an index to Torrey and Gray's Flora, Vol. II., which he will send to any one who may desire it, on receipt of a stamped envelope.

§ 79. Additions to the Bryology of the United States, by Chas. Mohr.

NO. II.

Description of two new species of mosses from the Southern United States, by Prof. Dr. KARL MUELLER, Halle.

Bartramia (*Philonotis*) **Mohriana**, C. Müller, *n. sp.* Dioica? *caulis robustiusculus* ubique densifolius, inferne fusco-radiculosus, ramulis, crassiusculis inequalibus plerumque brevibus et *strictis* nonnullis coronatus, breviusculus; *folia caulina undique inserta, madore et siccitate patenti-patula strictissima*, sordide lutescentia, *latiuscula, perfecte* lanceolata longe acuminata aristatula, longitudinaliter indistincte plicata, basi sæpius cavernosula, igitur irregulariter concava, margine angustissime revoluta, apice dense serrulato-denticulata inferne ob papillas prominentes nodulosa, nervo profunde canaliculato in aristam excedente furcata, *e cellulis angustis elongatis linearibus pellucidis laxis reticulata igitur tenuiter membranacea et flaccidula, valde punctato-papillosa;* perich. caulinis similia sed ba si

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latiore magis ovata laxissime reticulata, papillis ad parietes cellularum transversales indistinctis grossis singulis obtecta; theca in pedunculo flexuoso rubro robusto plantulam longitudine æquante parum obliqua magna globosa plicatula, operculo cupulato umbonato minuto; peristomium duplex normale: dentes externi latolanceolati valde et robuste trabeculati fusci striatuli, internis magis lutei asperuli breviores.

Patria Louisiana, Donaldsonville, ad truncos putridos in sylvis opacis, mensi Decembris. *C. Mohr.*

Species excellentissima; status humiliore robusta, foliis strictissimis nunquam secundis lanceolatis laxe reticulatis maxime papillosis prima scrutatione a *B. fontana* et *B. calcarea* distinguenda, cum alia nunquam confundenda. *Bartramia Schlumbergeri* Mexicana quoad habitum aliquantulum affinis. B. radicalis gracilitate maxima aliisque notis multis ac habitatione terrestri palustri toto cœlo differt.

Hypnum homalostegium, C. Müller, *n. sp.*—Monicum; cæspites lati humiles sordide virides duriusculi rigiduli; caulis repens, sed ramulis creberrimis brevibus erectis vel curvulis dense aggregatis tenuibus firmiusculis simplicibus pseudo-pinnatus; folia caulina dense imbricata indistincte secunda, madore caulem subjulaceum turgescentem tenuem sistentia, e basi cordata latiuscule ovata breviter acuminata concava, margine erecto obsolete denticulata, nervis binis brevibus, cellulis minutis indistinctis tenuibus angustissime ellipticis pallidis tenerrime papillosis, alaribus ad alas solum impresso-revolutas quadratis massa grisea repletis; perich. anguste lanceolato-acuminata longiuscula secunda concava, longitudinaliter plicatula, enervia, leviuscula, lutescentia; theca in pedunculo ascendente flavido-rubro horizontalis minuta asymetrico-cylindracea, medio valde constricta basi gibbosa vel strumosa, macrostoma badia, operculo minuto e basi planiuscula brevissme apiculato recto; peristomii dentes valde prominentes callum angustissimum sistentes madore conniventes, externi rubri valde cristati, interni lutei læves latiusculi carinati imperforati, ciliis singulis latis brevioribus pallidioribus interjectis.

Patria Alabama, West-Fowlriver, secus littora maritima ad corticem arborum: C. Mohr, vere 1871.

Hypno adnato proximum, sed hæcce species primo momento differt: ramis multo tenuioribus nunquam turgide julaceis, foliis caulinis integerrimis e cellulis multo majoribus distincte ellipticis lavissimis coloratis, perich. late ovatis acuminatis, theca longius pedunculata multo majore robustiore e collo angustiore curvato-oblonga nec gibbosa nec strumosa medio nunquam constricta et operculo magno e basi turgide conica rostellato. Primo intuito formis gracilioribus *Hypni cespitosi* simile, sed cellulis alaribus vesiculiformibus flavidis carens.

§ **80 Catalogue of Suffolk Co. Plants.**—Mr. H. W. Young calls our attention to an oversight on our part. In criticizing the title of this Catalogue we had forgotten that Dr. Gray in his *Structural and Systematic Botany*, which is the standard for this country, divides Lindley's Class of Acrogens into two, Acrogens and Ano-

phytes. According to this system, therefore, the title of the Catalogue is correct.

§ **81 Books Wanted.**—Hooker's Flor. Bor. Am.—Torrey & Gray's Flor. Bor. Am.—Torrey's Flora of New York (with colored plates). —Gray's Genera. Please address, stating price, H. H. Babcock, 11 18th Street, Chicago, Illinois.

§ **82 President of the Royal Society.**—It may be unknown to some of our readers that Dr. Joseph Hooker has been chosen President of this Society, the first time a botanist has been so honored we believe since the time of Sir Joseph Banks. This distinction bestowed upon the chief botanist of Britain by his scientific compeers may be regarded as their protest against the indignities to which he was subjected by a member of the late administration.

§ **83. Botanical Specimens by Mail.**—Mr. Tuthill has sent us the following:

"Post Office Dept., Appointment Office,
Washington, D. C. *March* 11, 1874.

Sir:—Your letter of February 24th is received. Botanical specimens may be sent in the mails as 'cuttings;' postage one cent for each two ounces or fraction thereof; packages limited to four pounds, wrapped so as to admit examination and unaccompanied by any writing in addition to the address.

Very respectfully, J. W. Marshall,
First Asst. P. M. General.

Frank H. Tuthil, Esq. Kalamazoo, Mich.

§ **84. Sandwich Island Hepaticae,** collected by H. Mann & W. T. Brigham, and named by C. F. Austin.

1. **Dendroceros Clintoni,** (*n. sp.*)—Fronde sublineari undulata crispata tenui minute areolata subseriatim puncta, involucro cylindrico sesquilineari punctato primum acuto glandis hyalinis appressis vestito, capsula trilineari fere sessili molli, sporis majusculis fuscis lævibus plerumque obtuse angularibus, elateribus breviusculis pallidis unispiralibus. "Sandwich Islands, *Mann & Brigham.*" Herb. Clinton.

2. **Marchantia crenata,** (*n. sp.*)—Fronde rigida carinata circa unciam longa et 2–3 lineas lata, apice bilobo dichotomove, subtus densissime radiculosa squamosa, supra planiuscula valde porosa, cyphis purpureis circularibus margine crassa ciliato-dentatis, receptaculo femineo majusculo convexo subeccentrico margine crenato subtus squamis brevibus instructo, involucris brevibus inæqualibus fimbriatis, perianthis (immaturis) circa 6-lobatis, pedunculo subunciali parce squamoso: receptaculum masculinum haud visum. In woods, Hilo.

3. **Marchantia Innovans,** (*n. sp.*)—Fronde parvula irreglariter divisa planiuscula subtenui adspecta eporosa resinifera magis minusve purpurea subtus anguste carinata, carina squamis brevibus purpureis instructa, laciniis linearibus oblongove-linearibus; fructu (immaturo) ex apice innovationis ventralis parvæ exorto, pedunculo barbato, receptaculo femineo parvo subcrenato subtus barbato. Hanalei, Kauai.

4. **Dumortiera hirsuta.** (*Swartz*) *Nees.*—Mountains west of Maui
5. **Dumortiera trichocephala,** (*Hook*) *Nees.*—Kaula Mountains, Oahu.

6. **Aneura (Pseudaneura) pectinata,** (*n. sp.*)—Dioica; planta fœminea iterum decomposita, fronde crassa obscura supra convexa saturate viridi serie singula cellularum minutarum hyalinarum marginata, ramis, 1–2 uncialibus magis minusve pectinatim dissectis laciniis difformibus inæqualibus nonnullis bi-trifidis apice sæpe attenuatis radicantibusque patentissimis in humido erectiusculis, calyptra scabra sesquilineari oblongo-cylindracea subclavatave, apice fusco papuloso, capsula elliptica ovali-oblongave: masc. minus distincte marginata ramulis brevissimis instructa, antheridiis in ramulorum apice profunde bifido biseriatis.—Oahu. Also communicated by *Dr. Hillebrand* (1866). The male plant occurring with *Anthoceros vesiculosus*, from Dr. Hillebrand.

7. **Aneura (Pseudaneura) multifidus,** (*Linn.*) *Dum.* On the fronds of *A pectinata.*

8. **Aneura palmata,** (*Hedw.*) *Lindberg.*—Oahu.

9. **Symphogyna semi-involucrata,** (*n. sp.*)—Fronde stipitata suberecta valide nervosa late undulata integerrima obtusa, involucro dimidiato brevi lacero, calyptra 3 lineas longa apice pistillidia sterilia fimbriata, capsula 2 lineas longa bivalva, valvulis apice cohaerentibus.—Oahu.

10. **Plagiochila adiantoides,** (*Swartz*) *Ldbg.*—Oahu.

11. **Cephalozia connivens,** (*Dicks.*) *Dum.*—With *Symphogyna semi-involucrata.*

12. **Frullania apiculata,** *Nees.*—Oahu.

13. **Frullania squarrosa,** *Nees.*—Oahu.

14. **Frullania Kunzei,** *L & Lg.*—Oahu.

15. **Frullania arietina,** *Tayl.*—With *Dendroceros Clintoni.*

16. **Lejeunia (Phragmicoma) Mannii,** (*n. sp.*)—Caule brevi vage ramoso, foliis imbricatis oblique ovalibus ovatisve valde convexis decurvis obtusis integerrimis, areolis majusculis versus marginem sensim decrescentibus, intercalaribus nigris obscuris, lobulo subrotundo inflato integro, amphigastriis magnis flabelliformi-rotundis (sæpe. magis latis quam longis), perianthio in ramulo longo terminali compresso-pyriforme ventre bi-dorso unicarinato alatove, angulis cristato-dentatis, involucri foliis parum majoribus subdentatis; colore subfusco.—Oahu.

17. **Lejeunia subsquarrosa.**—Phragmicoma subsquarrosa, *Aust. Proc. Phila. Acad. Dec.* 1869. (An Ptychanthus species?)

18. **Radula Mannii,** (*n. sp.*)—Caule rigido 1–2 uncias longo cum foliis circa 1¼ lin. lato pinnato vel iterum decomposito, ramulis breviusculis sub-decurvis patentibusve complanatis obtusis, foliis oblique ovali-rotundis subconvexis valde obtusis integerrimis toto margine anguste inæqualiter recurvis, lobulo magno apice lato semicirculari late obtuseque 1-2 plicato, margine interna caulem obtegente vel superante, areolis minutis subovalibus difformibus: flores et fructu ignoti.—Oahu.

19. **Radula pallens** (*Swartz*) *Nees.*—Among mosses, comm *James.*

15. **Sendtnera gracilis,** *Nees.*—Oahu.

16. **Sendtnera juniperina,** (*Swartz*) *Nees.*—Oahu.

20. **Mastigobryum cordistipulum,** *Ldbg.*—Oahu.

21. **Mastigobryum parvistipulum** (*n. sp.*)—Caule procumbente subdichotomo stolonibus brevibus instructo, foliis viridibus dissitiusculis oblongo-linearibus valde falcatis patentissimis subconcavis margine ventrali integerrimis subcrenatisve parum recurvis, apice lato oblique truncato inæqualiter tridentato, dentibus brevibus obtusiusculis nonnullis denticulatis, areolis magnis subquadrangularibus crassiusculis in centro pellucidis medialibus subovalibus basilaribus subinflatis cæteris minoribus subquadratis, amphigastriis minutis patentibus valde distantibus quadrato-transversalibus liberis obsoleteve connatis apice valde inæqualiter inciso- ciliatove-dentatis; fructu ignoto.—Oahu.

Differs from *M. tridens* in the more falcate leaf with a broader more obtusely toothed apex, in the more squarrose amphigastria, etc.

22. **Mastigobryum Brighami,** (*n. sp.*)—Caule subgracili flexuoso subdichotomo valde flagellifero, foliis laxe imbricatis subdecurvopatentibus subfalcatis leniter convexis ob cellulas magnas subinflatas ovali-rotundas versus basin subvittatis, areolis cæteris majusculis subquadratis, apice lato truncato dentibus breviusculis acutis sinibus obtusissimis subæqualiter tridentatis, basi haud dilatata, amphigastriis minutis subovatis appressis distantibus obscure connatis, apice eroso subdentatove.—With *M. parvistipulum.*

Differs from *M. parvistipulum* in its imbricated shorter leaves more equally toothed at the apex and with the cellules towards the base and ventral margin shorter; also in the more numerous flagellæ, appressed subentire amphigastria, etc. *M. tridens, Nees,* has larger leaves decidedly narrowed at the apex and more acutely tridentate, areolæ larger, etc.

23. **Pleurozia subinflata.** Physiotium subinflatum, *Aust.*—Oahu.

24. **Pleurozia conchæfolia,** (*Hook.*)—Oahu.

§ **85. Sandwich Island Hepaticae,** collected by Dr. Wm. Hillebrand, named by C. F. Austin.

1. **Plagiochila oppositifolia,** (*n. sp.*)—Caule tenui subsimplice fertili brevi sterili longiore frondiformi, foliis dissitis exacte oppositis utrinque in cristam minutam perbrevem connatis, illis in caule fertili elongato-obovatis sublinearibusve, subconvexis, apice subbifido, margine superiori versus apicem parce spinulosa inferiori subintegerrima, illis in caule sterili dissitoribus magis explanatis angustioribus, margine intergerrima fere plana, apice oblique uni-vel-inæqualiter bispinoso, perianthio ob innovationes laterali brevi campanulato, margine inferiori alata subincisa, apice profunde inciso-ciliato, foliis involucralibus subovatis incisis spinulosisve.

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2. **Jungermania piligera,** *Nees.*—Var.
3. **Jungermania robusta,** *Aust.—Proc. Phila. Acad.* Dec. 1869.
4. **Jungermania rigida,** *Aust—l. c.*
5. **Jungermania coriacea,** *Aust.—l. c.*
6. **Jungermania callithrix,** *L. & G.*
7. **Jungermania nana,** *Nees?*
8. **Jungermania (Gymnanthe?) Bolanderi,** *Aust. l. c.*
9. **Cephalozia connivens,** *Dicks.*
10. **Calipogeia bifurca,** *Aust. l. c.*
11. **Lepidozia Sandvicensis,** *Ldbg.*
12. **Mastigobryum cordistipulum,** *Ldbg.*
13. **Mastigobryum minutum,** (*n. sp.*)—Caule prostrato elongato tenuissimo, foliis valde distantibus anguste obcuneatis subfalcatis suberecto-patentibus et patentibus apice oblique obtuseque bidentatis dentibus subdivaricatis breviusculis acutiusculis, areolis majusculis medialibus ovalibus cæteris subrotundis paulum minoribus illis in margine (serie singula) confertis transversim vel suboblique compressis, amphigastriis minutis (diametro caulem æquantibus) ovato-subquadratis appressis.—With other Hepaticæ.

There are a few male spikes on the stems, these are very large, considering the minute size of the plant, of a round-ovate figure and compactly leaved.

14. **Pleurozia subinflata.** Physiotium subinflatum, *Aust. l. c.*
15. **Pleurozia conchaefolium,** (*Hook.*)
16. **Sendtnera juniperina,** (*Swartz*) *Nees.*
17. **Sendtnera gracilis.** *Nees.*
18. **Sendtnera tristicha,** *Aust.—l. c.* (An S. gracilis var. ?)
19. **Lejeunia subsquarrosa.** Phragmicoma subsquarrosa *Aust. l. c.* (An Ptychanthi species?)
20. **Lejeunia elongata.** Phragmicoma elongata, *Aus. l. c.*
21. **Lejeunia Mannii,** *Aust.*
22. **Lejeunia cucullata,** *Nees.*
23. **Lejeunia longifolia,** *Mitt?* On *Dumortiera denudata.*
24. **Frullania Kunzei,** *L. & L. G.*
25. **Frullania squarrosa,** *Nees.*
26. **Aneura (Pseudaneura) pectinata,** *Aust.*
27. **Aneura (Pseudaneura) multifida,** (*Linn.*) *Dum.*
28. **Aneura palmata,** (*Hedw.*) *Lindberg.*
29. **Steetzia cylindrica,** (*n. sp.*)—Differt a *S. Lyellii*; inflorescentia dioica, perianthio longiore cylindrico et capsula angustiore. Calyptra about two-thirds as long as the perianth, smooth, bearing about a dozen sterile pistillidia near its summit. (Male plant not seen.)
30. **Anthoceros vesciculosus,** (*n. sp.?*) Fronde crassa fusca venoso-nervosa opaca subpinnatifido-lobata lineari flabelliformi apice magis minusve dilatata abrupte incrassata regulariter venosa valde vesiculosa ob cavitas maximas valde inflatas rugosa sublamellato-cristata, margine crenata cristatave, involucro circa 3 lineas longo subcylindrico vel subfusiformi nervoso-striato sublamelloso parce glanduloso apice tridentato, capsula unciali et longiore nigra, sporis nigris minutissimis minutim muriculatis, elateribus fuscis tenuis-

simis longissimis subflexuosis teretis solidiusculis opacis haud articulatis (sine fibra spirali).

Remarkable for the venose and vesciculose frond, and for the very long and slender terrete jointless elaters. The veins of the frond anastomise and divide its substance up into large cavities. Rootlets numerous, long, granulose. Capsule about as large as in *A. laevis*, slightly curved or straightish; the valves more or less twisted when dry, without stomata. Spores about half as large as in *A. punctatus*, and the elaters many times longer than in that species, and of a different structure. Involucre of a solid texture.

31. **Marchantia polymorpha,** *Linn.*
32. **Dumortiera hirsuta.** (*Swartz*) *Linn.*
33. **Dumortiera denudata,** *Mitt.*
34. **Plagiochasma cordatum,** *Ldbg?*

§ **86. Dr. Torrey and Torrey's Peak.**—As some misapprehension exists as to Dr. Torrey's ascent of the peak named in his honor, we made inquiry of Mr. John H. Redfield, whose reply we give below. A note from Miss M. Torrey is to the same effect.

"I was not with Dr. Torrey on the occasion of the ascent to which you refer, having parted company with him in California in the end of August [1872]. But soon after his return home I had from him, and from his daughter who accompanied him, the full particulars of the affair; and as I had myself ascended Gray's Peak on the 30th July previous, the topography was sufficiently known to me to make their account quite intelligible. Their party, consisting of the Doctor and his daughter, and a Norwegian lady, related to Prof. Brock, of Norway, with a physician from Georgetown, whose name I have forgotten, and perhaps some others, started from Georgetown, for the purpose of ascending *Gray's* Peak. It was late in the season for the ascent,* and some of their friends in Georgetown counselled them not to attempt it. They proceeded, however, without any difficulty until they reached the shanty near the Baker Mine—a height of nearly or quite 12,000 feet, and on a plantation in full view of the two rocky cones named by Dr. Parry, *Torrey's Peak* and *Gray's Peak*. By this time the weather had become very cold, the wind also being keen and strong. The rarity of the air, too, at that height, told so severely upon the Doctor's respiration, that he found it impracticable to proceed further. He accordingly entered the shanty, built a fire, and had a *warm lunch* ready for the rest of the party, who, meanwhile, proceeded on horseback, and succeeded in reaching the summit of Gray's Peak. By the time they had returned to the shanty rain set in, which soon became snow; and long before they reached Georgetown all the neighboring mountains were covered with a fleecy mantle.

"So that though the Doctor did not literally ascend Torrey's Peak, yet he saw both it and its fitly-named fellow-peak.†

* Late in September.

† Gray's expression in his Memoir is—"*Stood upon the flank* of the snowy peak to which his pupil had given his (Torrey's) name;" which, in a sense is true, since both peaks are culminating points of the same ridge on which, Baker's Mine is situated.

I am not aware that Torrey's Peak (known in the vicinity by the later name of Mount Irwin) has been ascended, though it apparently presents no special difficulties; and Gray's Peak is usually selected for ascent, because a comparatively easy horse-trail has been prepared to the summit. When on Gray's Peak, I ascertained by a pocket-level that Torrey's Peak is a little the higher, though the difference is slight, probably 50 or 100 feet, and I think this is confirmed by other observations." ‡

§ 87. **Bromus Tectorum.**—In the January number of the *Bulletin* I notice, under the head of "Catalogue of Suffolk County Plants," a remark with reference to *Bromus tectorum*. About eight years ago, I detected a species, new to *this* region, which by comparison with an authentic specimen of the *B. tectorum* from Germany, preserved in my herbarium, I have regarded as identical with that plant. Having submitted it to the late Dr. William Darlington for inspection, he informed me that some time before, he had received specimens from a correspondent in Germantown, near Philadelphia. He at once referred it to the species above noticed.

Mine was gathered in the suburbs of our town, confined to one spot, its introduction, no doubt, adventitious. By the extended improvements of our town, the locality has been broken up. I enclose a small portion, which may prove sufficient for identification with the Suffolk County plant. HALLIDAY JACKSON.

WEST CHESTER, Pa.

[The small specimen sent corresponds very well with *B. tectorum* in the Torrey Herbarium.]

§ 88. **Synopsis of the Flora of Colorado,** by Thomas C. Porter and John M. Coulter. This is one of the "Miscellaneous Publications," relating to the U. S. Geological survey of the Territories now in progress under the charge of the Department of the Interior. It is a work of 180 pages, and is not a mere enumeration of plants, but, for all the species not described in the readily accessible "Manual" of Doctor Gray and the "Flora of the Southern States" by Dr. Chapman, the descriptions are quoted, thus saving the student from the necessity of referring to many reports and works not usually to be found in a private library. We notice in an advanced sheet of the "American Journal of Science" for May, that Prof. Daniel C. Eaton makes some rather severe strictures upon the manner in which credit is given in this work. We hope that Prof. Porter, who is apparently responsible for the literary portion of the work, may give a satisfactory explanation of what appears to have been an unfortunate inadvertence.

§ 89. **Desmodium.**—It may interest the readers of the Bulletin to know that Mr. Albert Commons has discovered another locality for the very rare Desmodium humifusum, Beck, in the south-east corner of Newcastle County, Delaware. Here, as in the Salisbury, Maryland, locality (now destroyed), the plant is completely prostrate, ramifying in every direction from the central root. It

‡ Whitney's measurement gives Gray's Peak .....14,145 feet.
Torrey's " .....14,192 "

flowers plentifully, but fruits rarely. Can it be a hybrid between D. rotundifolium, D. C., and one of the erect species?

Mr. Commons has also found D. ochroleucum, M. A. Curtiss, near Felton, Delaware—the most northern locality yet known. This is a well-marked species, always distinguishable from its trailing allies by the light green color of the leaves, its ovate leaflets strongly reticulate-veined, as are the always twisted divisions of the loments, and its ochroleucous flowers. It fruits abundantly and is a rank grower. W. M. C.

§ **90. Two Lichens of Oregon.**—The region proved to the experienced collector, Mr. Elihu Hall, less interesting as regards Lichens than California, and he was able to add but little to what was already known. The two plants now to be briefly described are, however, new to us.

Sticta Oregana (*sp. nova*)—thallo coriaceo-membranaces laciniato-lobato lacunoso-reticulato viridi-glaucescente, laciniis elongatis apice rotundatis sinuato-incisis margine crenato-lobulatis mox dissectis subtus inter papulas albas reticulatim brunneo-tomentosis; apotheciis sparsis mediocribus (latit. 2-4 millim.) margine thallo concolore demum excluso. Sporæ 6-8^{næ} in thecis, e fusiformi aciculares, 4-loculares, incolores, longit. 0,044-75 millim., crassit. 0,006-9 millim.

Upon trunks of trees, Oregon, *E. Hall.*

This fine accession to our Flora is not without a certain general resemblance to *S. anthraspis*, Ach., also peculiar to the West Coast, but belongs to the marked section of which *S. pulmonaria* is the type; differing from this no less in its *ensemble* than in its spores. Whatever the real rank of *S. linita*, Ach., it is scarcely better comparable with the present.

Rinodina Hallii (*sp. nova*)—thallo crustaceo tenui contiguo rimoso cinerascente, hypothallo nigro limitato; apotheciis biatorinis mediocribus (latit. 0$^{mm.}$, 7-1$^{mm.}$, 2) adnatis plano-convexis, margine obtuso integerrimo fusco discum fusco-nigrum opacum demum turgidum cingente. Hypothecium incolor. Sporæ octonæ in thecis, ellipsoideæ, biloculares, fuscæ, longit. 0,019-30 millim., crassit. 0,009-15 millim., paraphysibus bene distinctis.

Upon bark, Oregon, *E. Hall.* Upon Redwood, and Oak, California, *H. N. Bolander.*

R. sophodes v. confragosa is the most distinguished form of this genus on the Western coast, occurring on rocks and on the earth, where the fruit attains to the largest size perhaps as yet noted (the width exceeding 2$^{mm.}$) and also on trees. From this the present is seen at once to differ in its biatorine exciple, and generally Lecideeine aspect. The disk, in several specimens, is more or less distinctly white-pruinose. EDW. TUCKERMAN.

Terms—*One Dollar per annum beginning with the January number. For the Botanical Directory alone, 30 cents. Back volumes on hand.*

Local Herbarium, 3, E. 33d St.—Editor, 224, E. 10th St.

The Club meets regularly the last Tuesday of the month in the Herbarium, Columbia College, at 7½ P.M.

§91. **On some new North American Musci.**—C. F. Austin.

1. **Bruchia Hallii** (*n. sp.*)—Plantæ humiles, gregariæ, fusco-virides; caule 1-3 lineari subsimplici gracili inferne microphyllo, foliis lævissimis late ovatis erectis inferioribus appressis superioribus sensim subabrupteve augentibus acutiusculis vel breviter acuminatis integerrimis, reti inferiori laxiusculo pellucido oblongo-hexagono vel subrhomboideo superiori angustissimo breviter fusiformi, costa mediocri versus apicem subexpansa percurrente vel leniter excurrente, capsula in pedicello recto exserta una cum collo breviter pyriformi-elliptica longiuscule rostrata, collo pro genere magis parvo in pedicellum sensim transeunte, calyptra lævi mitriformi (subcucullatave) basi lobata ad tertiam partem capsulæ vel ultra descendente: inflorescentia generis: statura *Br. flexuosæ*.

Near Houston, Texas, *E. Hall.*

2. **Bruchia Texana** (*n. sp.*)—Statura et habitu *Br. Hallii*; differt tamen caule breviori, foliis inferioribus angustioribus acuminatis flexuosis superioribus multum longius et abruptius acuminatis acumine angustissimo canaliculato siccitate flexuoso, costa superne multum magis dilatata, reti minore e cellulis infra medium folii angustioribus et longioribus supra hoc in illas minutissimas brevissimas minutim granulosas subraptim transeuntibus formato, capsula paulum brevius tenuiusque rostrata, collo crassiori longiori in pedicellum abrupte transeunte.

Near Houston, Texas, *E. Hall.*

3. **Gymnostomum Rauanum** (*n. sp.*)—Caulibus gregario-cæspitosis brevissimis fastigiatim divisis, foliis caulinis satis viridibus lineali-lanceolatis mucronato-acutis subcanaliculato-concavis basi excepta opacis sublævibus margine planis integerrimis, costa subdepressa excurrente, capsula in pedicello tenui mediocriter longo exserta ovali tenuissime texta siccitate irregulariter striato-costata truncata macrostoma, operculo valde deciduo in siccis lato valde depresso oblique rostrato, in humidis angustato conico et fere recte rostrato, annulo rubro partim ad operculum ac partim ad os capsulæ adhærente, (peristomio nullo): inflorescentia ut in *Weisia viridula*.—Weisia viridula, var. gymnostomoides, *James in Herb. Porter* (fide James).

On clay banks, about Bethlehem, Pa. *E. A. Rau, Esq.*, and *Rev. F. Wolle.*

This species has much the general appearance of small forms of *Weisia viridula*, but is readily distinguished by the total absence of a peristome, broader annulus, more delicate texture of the capsule, which is also shorter and wider mouthed, and by the less concave leaves plane on the margins, etc.

4. **Fissidens Closteri**, *Aust. Ms.*; *Sulliv. Icon. Suppl. ined.*—Plantæ exilissimæ gregariæ acaules; foliis minutissimis (circa 2 paribus) in gemmula appressis ovatis, laminad uplicaturam vix excedente acuta minute apiculata apice subserrata, reti laxiusculo subquadrato, costa latiuscula tenui subdiffusa, capsula in pedicello ½-1½ lin. longo tenuissimo pallido exserta ovali ovatave siccitate (ore lato excepto) valde constricta, annulo valde inconspicuo cum operculo deciduo, operculo elongato-conico; peristomio generis; inflorescentia *F. exilis*.

On stones along woodland rivulets, on the Palisades, near Closter, New Jersey.

On account of the minute size of all its parts, this is probably the most inconspicuous of all known mosses, being invisible to the naked eye (in its native ravines) except with the aid of a strong and favorable light. It differs from *F. exilis*, its nearest ally, in its much smaller size and shorter leaves, the blade almost (or often quite) obsolete. Calyptra conic, covering only the rostrum of the opiculum, very slightly fissured on one side at the base. Teeth of the peristome when dry widely spreading at the base, erect above the middle; when moist inflexed and forming a cone over the mouth of the capsule; sublanceolate, split nearly to the base into two unequal segments, papillose, the articulations below close and indistinct.

5. **Meesia Macouni** (*n. sp.*)—Caule perbrevi dense cæspitoso innovante fastigiatim ramoso radiculis rufo-brunneis et purpureis dense et minute scabris instructo, foliis e basi augustata oblongo-lanceolatis subacuminatis planiusculis integerrimis versus apicem subserratisve laxissime (ut in *Funaria* et *Amblyodonte*) areolatis, areolis medialibus oblongis basilaribus elongatis illis versus marginem sensim augustatis (ut foliis submarginatis videatur) superioribus subrhomboideis, costa valida basi dilatata in apicem producta, perichætialibus brevioribus solidioribus brevius acuminatis crassius costatis, capsula cum collo (pro genere breviusculo) subpyriformi siccata subincurva pachyderma, peristomii dentibus pro genere longis (fere ut in *Amblyodonte*) erectis obtusis integris, processibus quam dentibus longioribus, pedicello 2-3 unciali, paraphysibus compluribus valde clavatis: cætera desunt.

In the Peace River Country, British Columbia, *Macoun* (1872.)

Remarkable for the very lax texture of the leaves, which are also broader than in our other species; also for the longish teeth of the outer peristome. It appears to connect the genus *Meesia* with *Amblyodon*. My specimens are too old, and the peristome is somewhat destroyed, yet it is sufficiently well preserved to show this relationship. I have not been able to detect any antheridia. Among the plants were a few very slender stems of a male plant having small distant distinctly margined bryoid leaves, and apparently belonging to some Bryum. The buds resembling male flowers each contained a cluster of minute white fusiform worms instead of antheridia and paraphyses!

6. **Leskea (Thedenia?) Wollei** (*n. sp.*)—Plantæ parvæ demissæ intricato-cæspitosæ vage et subpinnatim ramosæ et ramulosæ; cæspite superne fusco-viridi inferne magis minusve ochracei; foliis diversiformibus in caule primario late deltoideo-ovatis abrupte longe acuminatis, acumine valde flexuoso, illis in caule secundario augustioribus brevius acuminatis, ramulinis rigidiusculis ovatis haud vel breviter acuminatis valde concavis imbricatis siccitate subrugulosis, omnibus integerrimis cellulis crassioribus brevioribus confertioribus marginatis costa lata difformi brevi vel longiuscula simplici vel inæqualiter bicrura instructis, reti e cellulis mediocribus rhombeis illis ad basis angulos (et in marginem usque ad apicem) quadratis formato: floribus et fructu haud visis.

Niagara Falls, *Rev. Francis Wolle;* Lake Superior region, *Prof. John Macoun.*

Plant of about the size and of much the general appearance of *Hypnum adnatum*, Hedw. The position, shape and areolation of the branch leaves are also much as in that species, but they are more concave, and have the areolation shorter. The stem-leaves are shaped somewhat as in *Hypnum hispidulum*, Brid; but they are more concave, and have a more abrupt, longer, and more flexuose point and entire margins.

Differs from *Thedenia Suecica*, as described in Schimper's Synopsis, mainly in the somewhat rigid and more or less costate leaves.

7. Thuidium scitum (*Beauv*).—*Aust, Musc. Appalach., n.* 300.—Hypnum scitum, *Beauv. Brid. Bryol. Univ.* 2, p. 575; *C. Mull. Synop.* 2, *p.* 488; *Sulliv. Icon. Musc. p.* 155, *t.* 99, *ex parte; Sulliv. & Lesqx, Musc. Exsic, ed.* 2, *n.* 409, *ex. parte.*—(Thuidium Appalachianum, *Aust. Ms. olim.*)

Plantæ mediocres, depresso-cæspitosæ, colore atro et subglauco-viridi. Caulis 1–3 uncias longus prostratus simpliciter pinnato-ramulosus. Folia caulina late cordato-triangularia longe tenuiter apiculato-acuminata, basi late sulcata; ramulina minora cordato-ovata breviter acuminata laxius incumbentia; utraque concava erecto-patentia; costa validiuscula subpellucida ultra medium evanida; reti e cellulis subrotundis minutissimis chlorophyllosis minutissime papillosis formato; paraphyllia numerosa multiformia; perichætialia lævia solidiuscula profunde sulcata valide costata erecto-appressa sensim longe acuminata integerrima vel versus apicem obsoletissime denticulata; reti e cellulis augustissimis linearibus rectis formato. Capsula brunnea subcylindrica (elongato-elliptica) erecta vel leniter curvula siccata sub ore parvo constricta, basi acuta; operculo elongato-conico conicove-rostrato; annulo solido triplici persistente; peristomio leskeoideo albescente, dentibus angustissimis rectis vel siccatis leniter flexuosis, processibus quam dentibus brevioribus e membrana augusta exortis angustis sublinearibus rectis opacis granulosis aperte e serie singula cellularum exstructis haud carinatis, ciliolis binis imperfectis nullisve; sporis viridibus nonnunquamve luteolis. In Octobri et Novembri maturescat.

On the base of trees along the borders of a swamp, near Closter, New Jersey; very rare. (First found by me in 1864 on the base of a tree, about half a mile south of Closter.) (This tree was cut the following winter.) I again found it in 1872 on a tree about 80 rods south-west of the former station, along the east side of John Westervelt's woods. The following species is found on many of the trees in the same woods, in close proximity to this.

8. Thuidium æstivum (*n. sp.*)—Statura ramificatione circumscriptione foliorum et habitu *Th. sciti;* recedit tamen foliis perichætialibus tenuioribus minus profunde sulcatis subscabris apice minus obsolete denticulatis, costa tenuiore, reti breviore diversiformi (rotundo ovali et oblongo), caulinis minus valide costatis acumine magis flexuosis, ramulinis densius granuloso-papillosis. Capsula oblonga macrostoma straminea subhorizontali textura laxiore, ore obliquo, basi obtusiore, operculo majore alte convexo abrupte ob-

tuse et brevius rostrato magis deciduo basi submarginato, annulo pallido deciduo, peristomio hypnoideo pallido luteolo, dentibus latioribus conniventibus in humido incurvis (apice recurviusculo exceptis), processibus multum latioribus e membrana latiore exortis incurvis lævibus hyalinis carinatis carina pertusis, ciliolis 2–3 perfectis subæquilongis, sporis luteolis: in Julio maturescat.—Thuidium scitum, var. æstivum *Musc. Appalach. n.* 301.—Hypnum scitum, *Sulliv. & Lesqx. Musc. Exsic. ed.* 2, *n.* 409, *ex parte.*

On the base of trees in woods, New Jersey to Canada and Ohio; common. Inner perichætial leaves long and narrowly pointed, but less gradually so than in *Th. scitum.* Pedicel of the same color as the capsule (pale yellow), and, as in all the Thuidia, obscurely scabrous. Peristome with the processus and ciliolæ nearly or quite as long as the teeth. Paraphyllia multiform. Color of the plant green, glaucous green, or often yellowish green.

9. Plagiothecium Passaicense, *Musc. Appalach. n.* 362.—Dioicum, minutulum, cæspitulosum; fl. masc. polyphyllo eparaphysato antheridiis 1–3 instructo, fl. fœm. paraphysibus magis numerosis brevibus et pistillidiis 12–30 instructo, capsula in pedicello brevi tenui erecta minuta siccitate turbinata collo distincto estriato instructa, peristomii dentibus angustis fere rectis erectisque, ciliolis imperfectis, follis perichætialibus pluribus late ovatis abrupte acuminatis ecostatis estriatis integerrimis vel apice eroso-denticulatis, foliis caulinis triangulari-lanceolatis subcanaliculato-concavis basi subtruncatis margine integerrimis planis angustissime recurvisve, reti e cellulis longis angustis subfusiformibus basilaribus valde brevioribus nec inflatis nec decurrentibus instructo.

Prof. Macoun, of Canada, has recently sent me fine fruiting specimens of this interesting little moss, found growing on an old stump near Belleville. It resembles both *Pl. pulchellum* and *Pl. latebricola*, but is smaller than either (being the smallest of the genus). Besides it differs from the former in its inflorescence, much shorter and slenderer pedicel, shorter erect capsule with the outer peristomal teeth much narrower and erectish when dry, and with the ciliæ of the inner peristome imperfect, perichætial leaves less convolute and not plicate, stem-leaves narrower, etc.; from the latter it differs chiefly in the texture of the leaves, which are also neither decurrent nor furnished with inflated cellues at the base.

10. Hylocomnium Flemmingii (*n. sp.*)—Robustum pallidum; caule subsimplici erecto rigido apice valde obtuso, foliis e basi cordata late lanceolato-ovatis obtuse acuminatis valde flexuoso-squarrosis subfalcatis profunde sulcatis versus apicem minutissime papillosis nitidis bicostatis ad basis angulos minute angusteque subquadrato-areolatis, margine minute confertim serrulata ad basin late reflexa et ciliis minutis subdecompositis ornata, costis distantissimis tenuibus vix ad medium productis basi ciliatis; floribus et fructu ignotis.

Vancouver's Island, 1872, *John Macoun.*

Remarkable for the obtuse apex of the leaf, with minute decompound ciliæ on the margins and costæ at the base. The costæ are wholly distinct at the base throughout, wide apart and nearly parallel.

§ 92. **Charles Frederick Meisner** – as the announcement made by the bereaved members of his family inform us, died at Basle, on the second of May, in the seventy-fourth year of his age.

For the details of the life of this excellent botanist and estimable man we must wait until the tributes to his memory arrive, which his associates in his native Switzerland and in the chief centres of science in Europe are sure to offer. Our present information is scanty. Pritzel, in the new edition of his Thesaurus, usually records the date and place of birth of botanical authors, but they are omitted in the present instance. We believe, however, that he was a native of the Swiss Canton, in which his professional life was passed. The orthography of his name is somewhat ambiguous. In the title pages of his works and in the signature to his letters, it is *Meisner*. In the family circular announcing his decease it is *Meissner*. The interesting Melastomaceous genus dedicated to him by his friend and preceptor, De Candolle, is *Meisneria*. In the new Genera Plantarum of Bentham and Hooker, it takes the form of *Meissneria*. That he was a pupil of De Candolle, at Geneva, appears from the preface to his earliest work, the Monograph of the Genus *Polygonum*. This was published in the year 1826, and he had already taken his degree of Doctor in Medicine. Not long afterward he was called to the chair of Botany at Basle, which he had held for more than half a century. His largest and his main independent work is his *Plantarum Vascularium Genera secundum Ordines Naturales digesta*, in two folio volumes, published between the years 1836 and 1843. In one volume the genera are *tabulis diagnosticis expositæ;* the other volume is a commentary, with very copious references. His most important publications in systematic botany, however, were contributed to the periodicals of the day, such as the *Linnæa*, and to the great works of his friends De Candolle and Von Martius, in which he was a most valued collaborator. For De Candolle's *Prodromus* he elaborated his favorite order, *Polygonaceæ* (the *Eriogoneæ* excepted), and the equally large orders *Proteaceæ*, *Thymeleaceæ*, and *Lauraceæ*, as well as the small order *Hernandiaceæ*. For the *Flora Brasiliensis* he worked up the same orders, also the *Convolvulaceæ* and the *Ericaceæ*. With these creditable and laborious productions his botanical career came to a close, nearly a dozen years ago, his health and powers having failed him. Yet in his declining years he was able to give attention to the very large and valuable herbarium which he had formed, and over which he lovingly lingered. As none of his children took to botany, his herbarium naturally became a chief solicitude. He corresponded with the writer of this notice and with Dr. Torrey upon the subject, deploring the probable necessity of its being broken up and dispersed in detachments after his decease, in case it remained in Europe. His anxieties were promptly allayed, and his remaining years made happy, through the purchase of this important herbarium, essentially upon the owner's own terms, by a member of the Torrey Club, who generously added it to the Torrey Herbarium. Dr. Torrey lived to see a portion of this collection in its new home, and Prof. Meisner, a year later, had the great satisfaction of know-

ing that the whole was safe in its chosen destination before he also went to his rest in a good old age. A. G.

§ 93. **First Field Day of the Club.**—The club having decided to hold field days this summer, a small company explored the Ramapo Mountains, near Sufferns, Rockland Co., on Saturday, May 23d.

The following interesting plants were found, *Clematis verticillaris*, DC.; *Epigæa repens*, L.; *Corydalis flavula*, Raf.; *Staphylea trifolia*, L.; *Polygala paucifolia*, Willd.; *Prunus Americana*, Marshall; *P. pumila*, L.; *Mitella diphylla*, L.; *Asarum Canadense*, L.; *Habenaria viridis*, R. Br.; *H. bracteata*, Reich.; *Orchis spectabilis*, L.; *Uvularia perfoliata*, L. The last named species was larger than we have ever before seen, viz., two feet high, with flowers an inch and a half long; the granular-roughened sepals and sharp-pointed anthers showed it to be *U. perfoliata* and not *U. grandiflora*, as we at first thought it. G. C. W.

§ 94. **New Fungi**, by W. R. Gerard. *No. III.*

Sphœria rostrospora, (*n. sp.*) — Perithecia orbicular, densely crowded, seated on a blackish, compact, fibrous stroma; asci cylindrical; spores ovate, binucleate, dark-brown, .0006′x.0002′, furnished at each extremity with a hyaline beak.

Encircling the base of a stalk of *Inula Helenium*.

New Paltz Landing, Ulster Co., September.

Patellaria similis, (*n. sp.*)—Receptacles coriaceous, sessile, crowded, smooth, black; margin swollen, disk concave; spores elliptical, triseptate, nucleate, hyaline, .0006′x.0002′.

On dead branch of oak (*Quercus rubra*), Poughkeepsie.

This would seem to come near Cooke's *P. parvula* (which I have not seen), but differs in many respects according to the description in the "Hand-book."

Patellaria dispersa, (*n. sp.*)—Receptacles black, sessile, scattered, margined; asci cylindrico-clavate; spores varying from subpyriform to clavate, 4-8 septate, the cells filled with nuclei, .0014′x.0006′ (at the broad end), pale brown.

Widely scattered over the bark of red cedar (*Juniperus Virginiana*).

New Paltz Landing, Ulster County.

Hysterium fibrisedum, (*n. sp.*)—Perithecia linear elongated or oval, obtuse at the ends; lips closed; spores obovate, 7–8 septate with one long, longitudinal division, hyaline, often slightly bent.

Seated in long parallel series on the fibres of old wood of Robinia, Poughkeepsie. Scarce; I have found but a single specimen thus far.

Hysterium vixvisibile, (*n. sp.*)—Perithecia very minute, oblong-elliptic, black, opaque, without striæ; lips swollen, aperture slightly gaping; spores oblong, triseptate, pale brown, .0005′—.0006′ x .0002′.

The perithecia are so minute as to appear like mere specks to the naked eye. The plants are extensively scattered over the bark, lying in all directions.

Poughkeepsie; on bark of dead, unknown branch.

Peziza Cucurbitæ, (*n. sp.*)—Cups sessile, when moist waxy,

scutellate, disk pale tan-color, margin entire: when dry contorted, somewhat horny, and disk dark purple-brown; spores simple, oval, .0004′ long.

On dried rinds of squash (Cucurbita) in company with *Phoma Cucurbitacearum*. Poughkeepsie, September.

Helminthosporium clavatum, (*n. sp.*)—Flocci densely fasciculate; simple, septate, light-brown; spores elongated, clavate, 10-septate about from .001′—.003′ long.

Forming roundish black spots on the under surface of the leaves of *Asclepias incarnata*. Poughkeepsie, Autumn.

Septoria Salliæ (*n. sp.*)—Spots large, roundish, pallid, circumscribed by a reddish-brown line: perithecia minute, black, scattered; spores simple, rod-shaped, hyaline, bent, .0007′ x 0001′. On leaves of *Acer saccharinum*. Poughkeepsie, Autumn.

§ **95. New Localities.**—Dr. Gray, in *American Journal* for April, states that Howard Shriver, Esq., of Wytheville, Va., finds *Pachystigma Canbyi* together with *Carex Fraseriana* in the vicinity of that town. (Professsor Wood has procured specimens for the Club.) Mr. H. D. Keeler, of Jacksonville, Fla., finds *Pavonia spinifex*, Cav., in dry, open woods, at Mayport (mouth of St. John's); probably a waif from the West Indies.

§ **96. New Publications.**—We have received: 1. Archives of Science, Nos. 8 and 9, completing Vol. I., and continuing the Phenogamous Flora of Vermont, by Prof. F. Perkins, and the Cryptogamic by C. C. Frost. 2. *Gardener's Monthly*, Vol. XIII., No. 1, edited by Thomas Meehan. 3. The Club is indebted to Prof. F. V. Hayden, of the Territorial Survey, for a copy of the *Flora of Colorado*, by Thomas C. Porter and John M. Coulter, noticed by a correspondent elsewhere. 4. Dr. Gray's notes in Silliman are, as always, of great interest. 5. The *American Naturalist* abounds in matters of interest to Botanists. All friends of the science should give it their support. 6. *Revision of the North-American Chenopodiaceæ*, by Sereno Watson from Proc. Am. Acad. of Arts and Sci., Vol. IX. We have here another of Mr. Watson's admirable monographs. Attention has heretofore been called to *Chenopodium leptophyllum* Nutt., found by Prof. Eaton at Absecom, N. J.; confer Mr. Watson's note, § 65 of current vol. of Bulletin. *Blitum capitatum* L., we gathered many years since in an orchard at Orange, N. J., where it seemed to be at home, Mr. Watson limits it to the northern border states.—7. *The New York Semi-Weekly Tribune*, Friday, June 5, contains a contribution by Dr. Gray, on *Insectivorous Plants, Additional Investigations.* It consists chiefly of extracts from letters of Dr. Mellichamp, of Bluffton, S. C. These letters give Dr. M.'s observations and experiments in relation to the wonderful adaptations of *Saracenia variolaris*, Mchx, for catching insects and converting them into food. This is one of the most marvellous of the many extraordinary relations of plants to insects. A notice attached to our copy of the *Tribune* states that for a few days copies will be sent post-paid to any address

in the United States on receipt of five cents for each.—8. *Catalogue of Plants growing without cultivation in the State of New Jersey, with a Specific Description of all the Species of Viola's found therein. Directions for Collecting &c. Suggestions to Teachers, &c. To which is added a Directory of living Botanists of North America and the West-Indies.* By Oliver R. Willis. J. W. Schermerhorn & Co., 14 Bond street, N. Y. The Directory of Botanists is the Second Part of the Bulletin's Directory, copied bodily, not even the supplementary corrections and additions which accompanied it being introduced, nor those which were added in a subsequent number, not even the important one of H. H. Babcock. We see that Mr. Willis has obtained a copyright for his Catalogue, including our Directory, which is not the least valuable part of it. We find it hard to understand this obliviousness of the rights of others.

As for the Catalogue itself, it is strange, in view of the professions in the introduction, that the author should seriously attempt a list of New Jersey plants, and not consult so readily accessible sources of information as Gray's Manual and the Bulletin of the Botanical Club. Yet many plants native to New Jersey are entirely ignored by him, *Caulophyllum*, *Polanisia*, *Rhamnus*, *Frangula*, *Eclipta*, *Lechea Nova-Cæsareæ*, *Pogonia divaricata*, for example; and, in his own favorite genus, *Viola rotundifolia* and *V. rostrata*. We prefer not to dwell on the imperfections and faults of the work. Mr. Willis's contributions to the Flora of the State of New York lead us to expect better things. There are a number of interesting localities contributed by Mr. Canby, Prof. Porter, Dr. Knighton, and others.

§ **97. Dr. Chapman's Herbarium.**—We are informed that Dr. Chapman is desirous of disposing of his Herbarium. It must be valuable as containing the types of the new species described in his "Flora of the Southern United States," and as being rich in Southern plants generally, now so difficult to obtain. His address is Apalachicola, Florida.

CYPERACEÆ.

CYPERUS L.—*C. flavescens*, L.; Borders of salt marshes and in bog meadows, *Torr. Cat.*; Long Hill and Chatham, N. J., *W. H. L.* —**C. diandrus**, Torr.; "In salt marshes, Hoboken," *Torr. Cat.*; frequent where water is brackish, *State Flora:* Var. *castaneus*, Torr.; more common in the interior of the State, *State Flora.* Dr. Torrey in his Catalogue, 1819, p. 90, says of his new species, that it is rarer than *C. flavescens*, but not uncommon in Hoboken meadows, generally in overflowed situations. We find the var. *castaneus* in all directions around New York, and some rather bleached looking specimens from muddy or "overflowed" situations, but doubt the existence of any valid distinction between the type and variety. If *C. diandrus* is more than an American variety of *C. flavescens*,

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the only obvious distinction, in addition to those mentioned in the Manual, are the greater breadth and commonly greater length of the spikes. *C. flavescens* does not seem to be common about New York.—**C. Nuttallii,** Torr.; Long Island; New Jersey; Staten Island; N. Y. I., *State Flora.* Abundant at Coney Island, Babylon, etc. —**C. erythrorrhizos,** Muhl.; Edwards Pond, Suffolk Co.—**C. inflexus,** Muhl.; Closter, 1861, not since found, *Austin.*—**C. dentatus,** Torr.; N. J., *Torr. Cat.;* Sandy swamps, L. I., *State Flora;* Staten Island, Red Bank, South Amboy, Bergen Point, *W. H. L.*; Closter, common, *Austin.* Abundant in Hamilton Co., but in none of my specimens are there tubers attached to the rhizoma, as stated in the State Flora; almost every specimen is proliferous, *W. H. L.*— **C. phymatodes,** Muhl.; "On the sandy beach about Bath, L. I." *Torr. Cat.*; Long Island, *Ruger.*—**C. strigosus,** L.; very common; N. Y. I.—**C. Michauxianus,** Schultes; common in the neighborhood of N. Y., and Long Island, *State Flora;* Harlem River, *Torr. Herbarium.;* Tottenville, *W. H. L.;* Closter, common, *Austin.*— **C. Grayii,** Torr.; abundant in the sandy parts of Long Island, Staten Island, and New Jersey.—**C. filiculmis** Vahl,; common on southern part of L. I.; *Ruger;* Staten Island; New York Island; Closter, *Austin;* Chatham, N. J.; generally common, *State Flora.*— **C. ovularis,** Torr.; Closter, rare, *Austin;* elsewhere not uncommon, Bergen Point; Long Island; High Bridge, N. Y.; Staten Island, etc.—**C. retrofractus,** Torr.; "I am pretty confident that I found this species many years ago on the Island of New York and on Long Island. It grows sparingly about Hoboken, and is not uncommon in pine barrens of New Jersey." *Torrey in State Flora.* We know of no one who has found it in this vicinity of late years.

DULICHIUM, Richard. — **D. spathaceum,** Pers.; common; N. Y. I.

FUIRENA, Rottböll.—**F. squarrosa,** Mchx.; *Le Roy;* Long Island, *State Flora;* Suffolk Co., *Miller & Young:* Var. **pumila,** Torr.; Long Island, *State Flora.*

ELEOCHARIS, R. Br.—**E. Robbinsii,** Oakes; Suffolk Co., *Miller & Young.* **E. tuberculosa,** R. Br.; Long Island, *State Flora;* New Jersey Barrens, probably within our limits, *W. H. L.*—**E. obtusa,** Schultes; common; N. Y. I.—**E. olivacea,** Torr.; Mohegan Lake, Westchester Co., *W. H. L.;* Long Island, near Babylon, *State Flora.* Hackensack Marshes, abundant; Closter, common, Austin.—**E. palustris,** R. Br.; common; N.Y. I.: var. **calva;** Hackensack swamps. *W. H. L.*—**E. rostellata,** Torr.; common in the Hackensack Meadows, and on Long Island. We believe that Dr. Allen was the first to point out the curious habit of this plant in rooting from the apex of the sterile shoots, forming loops which catch the feet of the passenger.—**E. intermedia,** Schultes; In swamps, N. J., *Torr. Cat.* ("*Scirpus intermedius,* Muhl. Gram.")—**E. tenuis,** Schultes; common; N. Y. I.?—**E. melanocarpa,** Torr.; Suffolk Co., *State Flora, Miller & Young.*—**E. acicularis,** R. Br.; common, particularly abundant on Long Island.—**E. pygmæa,** Torr.; common near New York, and on Long Island, *State Flora;* Closter, common, *Austin;* Staten Island, Weehawken, &c.

§ 98. **On the Calyptra in the Genus Archidium.**—(In the year 1868, after long and patient search, I succeeded in finding the *Calyptra* in the genus *Archidium*. Previous to this it appears never to have been noticed by any one. I immediately communicated the discovery to Mr. Sullivant, presuming that he would give us a correct figure of this organ, and of its position with regard to the mature capsule, in his promised "Supplement to Icones Muscorum." But learning from Mr. Lesquereux that he left no notes or drawings on the subject, I have concluded to furnish for publication in the BULLETIN a synopsis of my own notes.)

In Archidium Ohioense, *Schimp.*, A. alternifolium, (*Brid.*) *Schimp.*, and A. tenerrimum, *Mitt.*, the only species of the genus known to me, almost immediately the capsule begins to form the calyptra ceases to develop, and, rupturing partly around the base, is quickly left at the base of the capsule, usually slightly adhering by a portion of its margin to the apex of the vaginula. It consists of a long style, slightly expanded and lobed at the base. The style at length becomes curved, much flattened and oblique by being crowded between the perichætial leaves and the capsule; it is many times longer than in the genus *Sympoma*, Aust. (*Micromitrium*, Musc., Appalach.), while the expanded portion is equally as minute and as imperfectly developed. It occasionally ruptures, vertically, throughout nearly the whole length of the style; in this case a portion of it is left on either side at the base of the capsule.

C. F. A.

§ 99. **Rumex Patientia, L.**—This introduced species of Rumex appears to be little known, though it has been in the country for two hundred years. Is it actually rare, or has it commonly been overlooked? Our Manuals of Botany do not furnish us with much light on the subject. This plant has been known for a number of years in Amherst, Mass., and during the past three seasons we have found it not rarely in the neighboring towns, growing with *R. crispus and R. obtusifolius* under the same conditions and as thriftily as either of these species.

It is still more common at Highgate Springs, Vt., where for miles it may be seen on the roadside, and increasingly common as you cross the Canada line. Specimens from all these localities have been submitted to competent authority and determined.

Will not some of the readers of the BULLETIN interest themselves in the matter, and, by furnishing complete and mature specimens of all the less known Rumices in their vicinity, assist in determining more fully the range and character of the genus under consideration?

H. G. JESSUP, Amherst, Mass.

§ 100. **Discharge of Pollen in the Paper Mulberry.**—Some two years ago (vol. ii, No. 4), this subject was presented in the BULLETIN, by my father, Dr. Martin. I had myself never seen the phenomenon of the explosive discharge of pollen by this plant, and have consequently watched for it with much interest. This season, however, I have had the opportunity not only of witnessing, but of studying, the whole process.

It will be remembered that *Broussonetia papyrifera* is a dicecious

tree, the staminate catkins of which, produced in immense numbers, are loosely covered with the small apetalous, four-parted flowers. The fallen catkins always exhibit the opened calices, with the four stamens stretched out at full length and more or less reflexed.

On a warm morning, late in May, procuring a branch laden with catkins, from a cluster of young trees where the discharge was in full blast, I had repeated discharges take place while the branch was held in the hand. The catkins were not fully expanded yet, a few of the flowers only being open, with their reflexed and extended stamens, while the majority were closed or but half-opened. The latter showed the stamens coiled over in a twisted arch or bow, inwards and downwards, with the white anthers closely adjacent to each other in the bottom and centre of the calyx-cup. I fixed my eye on certain particular flowers, and watched them as long as I had time, in hopes of seeing the actual opening and discharge; but Nature will not hasten for our convenience. Other flowers would send off a puff; but all was done in an instant, and I had not my eye on the right one at the right time. Failing in this, I tried loosening a stamen of a nearly-open flower, with a pin. Instantly it sprang outward and backward, assuming the usual full-length reflexed position, and discharged its pollen in the manner observed, the anther-cells springing open at the same moment, and appearing empty as soon as the eye could note them. This I did over and over again, and always with the same result. In the still air of a room, the pollen-cloud from a single anther could be distinctly seen for about six inches from the point of discharge.

The anther-cells open at the same time with the springing out of the stamen; but whether in consequence of striking against the stalk and the adjacent flowers, or independently, could not be determined. They appear for a very short time like exquisite little valves of white silk, lustrous and delicate; but almost in a quarter of an hour they begin to show signs of fading, and speedily assume that withered aspect that is so familiar on the fallen catkins.

How far this whole phenomenon is familiar to botanists in general, I cannot say. Prof. Gray remarks of the section including this tree with Morus proper and Maclura, "filaments inflexed in the bud, spreading elastically when the calyx expands." The explosive discharge, however, does not seem to be familiarly recognized. It is about as complete and energetic a method for distributing the pollen so as to reach the fertile trees, as can well be imagined. The air around a staminate tree must be fairly charged with the grains for days; and the lightest wind must carry them to long distances. Unfortunately, the fertile trees are so scarce that, for the most part, all this activity is but wasting the pollen "on the desert air"; and I fear the species are dying out in the city, for it is only by offshoots that any new trees are produced.

It may be well to add that all the evidence shows the process to be purely mechanical, and in no way connected with any insect agency. There is nothing in these plain and odorless catkins to attract insects; and the discharge goes on in the room, or even in the hand, where no insect is near.

D. S. Martin,
June 25, 1874. 236 West Fourth St.

§ 101. New Comer.—I was handed the other day by a friend, a plant from the neighborhood of Providence, which Sereno Watson identifies as *Crepis aurantiaca*. I have never heard of it in this vicinity before. Mr. Watson informs me that it is becoming introduced at the East. W. W. BAILEY.

§ 102. Connecticut Valley Botanical Society.—From a notice in the *Springfield Republican* we learn that this Society had a very animated meeting at Mt. Holyoke Seminary, Wednesday, June 10. Prof. Biscoe demonstrated the course of the pollen tubes in Vinca and Apocynum, I believe, for the first time. I hope this accomplished investigator will be able to demonstrate the origin of the glands, which I was led to suspect come from the anthers, a suspicion in which I found Schleiden had anticipated me. Schleiden, however, from a study of *Gomphocarpus* and *Hoya*, almost concludes that they are derived from the winged appendages of the anthers; it seemed to me, that, in *Apocynum*, they originated in the lower portion of the contents of the anther cell, *i. e.*, were disintegrated pollen. Schleiden remarks that the investigation is one of the most difficult. (Ball., Vol. III., §§ 81, 89, 95, Vol. IV., §§ 3, 33.)

The fact that Apocynum captures insects was well known. The relation of this to the fertilization of the plant I believe was first pointed out by myself, though I found that Schleiden had already detected and figured the true stigmatic surface and tissue. The notice of the meeting seems to ascribe more than his share to Prof. Biscoe, a misapprehension for which I am assured he is not responsible. I may here state that last summer, in Hamilton Co., N. Y., I found some quite large lepidoptera captured by *Apocynum androsæmifolium*; the name of the species, kindly given me by J. A. Linter, through Prof. D. S. Martin, is *Ctenucha Virginica*, Charp., (*Glaucopis Latreillana*, Kirby.) W. H. L.

§ 103. Darlingtonia as a Fly trap.—A lady writes that in Nevada City they use the leaves of Darlingtonia Californica in what may be a useful as well as ornamental way by placing them upon the tables, with a little molasses smeared in the "throat" of the tube to attract the flies. W. B.

53 Fulton St., N. Y.

§ 104. Errata.—In Mr. Austin's Musci, § 91, p. 24, **Plagiothecium Passaicense**, 4th line, for "12-30" read "12-20;" **Hylocomnium Flemmingii**, 5th and 6th lines, for "ad basis . . . . . subquadrato—" read "minute angusteque (ad basis angulos subquadrato—"); for the last sentence on the page read "The costæ are wholly distinct at the base (wide apart and nearly parallel throughout).—§ 94. **Hysterium fibrisedum**, 3d line after the word "bent," add ".0011' x.0004' (at the broad end.") In April No., p. 18, § 86, l. 19, for "plantation" read "plateau."

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§ 105. **Suffolk County Notes.**—**Onopordon acanthium**, L.—In Prof. Peck's Report for 1872 Greenport and Shelter Island are given as new stations of this rare plant. I saw it about a year ago growing on the new camp-meeting grounds at the latter place, where it will doubtless soon be exterminated in the course of the improvements now making. There it was small, and growing in dry, sandy soil, doubtless stunted by the drouth; no specimens seen were more than two feet in height, and none had bloomed by July 24th. This season I saw a patch growing here in Northville, where part of a boat load of ashes from the western part of the State or Canada had been dumped last season; also near Riverhead, just inside the fence bordering the highway, and in the edge of a field of oats a row two rods in length was very conspicuous through June and July, although I had never noticed any there before. They made a splendid growth, attaining a height of six or seven feet, blooming abundantly all through July, and really looked as if they had been planted there. After some scratches in the endeavor to obtain specimens without a knife, I left them for a more convenient season, but, when I passed that way again, found them ignominiously pitched into the street.

In the Manual description, among the generic characters, I read "bristles of the pappus—not plumose." In all the specimens I have examined the bristles have fine barbs pointing upwards. Is not the term plumose rather indefinite?

Block Island.—A recent visit to this little island proved it to be the poorest locality for botanizing I had ever seen; the whole surface, which bears much resemblance in configuration and character to Montauk, being under cultivation and entirely destitute of trees or shrubs, excepting a very few silver poplars in the sheltered angles of dwellings. I don't imagine that there is a single botanist among the fourteen hundred inhabitants. The only spontaneous vegetation I noticed were *Rumex crispus*, *Cirsium arvense*, those horrible pests, very abundant in fields near the landing, *Lycium vulgare*, the Duke of Argyle's "tea-plant," extensively planted for ornament and escaping from cultivation in many places, and two or three common water plants in a small pond. But the growth of marine *algæ* was to my eyes something wonderful. Never, even in tropical waters, have I seen them growing with a tithe of the luxuriance they display upon the rocks of a basin that is less than four years old. There were forests of *fucus*, which with the *ulva* made a dense covering for the rocks, and then there were huge rosettes of *kelp* from four to six feet in diameter, with waving fronds almost as long, curving gracefully outwards. Altogether, they formed as brilliant a parterre for a "sea-garden" as heart could wish.

Cratægus Crus-galli, L.—Notes made June 14th—Young thorns $1\frac{1}{2}'$–$2'$ long, still soft and flexible, have several minute but distinct triangular-lanceolate leaflets, thus adding another characteristic to that of position in proof of their branch-like nature. I have seen these thorns bearing true buds in winter—of course, from the axils of the scale-like leaves. These ugly thorns are then degenerated or partially developed branches, serving to ward off animal enemies. And another singular fact in this connection is that only

the first three or four leaves on the new shoots bear thorns in their axils, the rest having only a single bud, which develops into a branch the following spring, while upon each side of the thorns are the supernumerary buds from which two shoots arise.

Plantago pusilla, Nutt.—This little plant I have noticed more frequently the past Spring than ever before; by roadsides in sandy soil and in grass fields as loamy as any of our lands they grow by the thousand—more abundantly, I think, than any other species of the genus. I must believe that botanists as well as others have overlooked it on account of its minute size.

Additions to Suffolk Co. Catalogue.—Thus far this season, Mr. Miller and I have added to our list the following species: *Spergula subulata*, *Salix discolor*, *Menispermum Canadense*, *Bromus racemosus*, *B. mollis*, *B. sterilis* (distinct from *B. tectorum*,) *Trisetum palustre*, *Eatonia Pennsylvanica*, *Festuca nutans*, *Carex utriculata*, *C. sublata*, (dwarf form), *Erodium cicutarium*, *Crataegus tomentosa*, *Cardamine hirsuta*, var. *sylvatica*. H. W. YOUNG.

AQUEBOGUE, *Aug.* 4.

§106. Additions to the Bryology of the United States, by Chas. Mohr.

NO. III.

Description of two new Musci from the Pacific coast of the United States.

Lately I have come into possession of fine specimens of the *Hypnum pseudo-sericeum*, C. Müller, mentioned as new from Oregon in the January number of the Bulletin, but too incomplete to allow the proper delineation of its characters. The author of the species has drawn the following description from fertile specimens of great perfection which I was enabled to forward to him.

1, Hypnum (*Homalothecium*) **pseudo-sericeum**, C. Müller, *n.sp.* Dioicum; laxe cæspitosum *procumbens vage ramosum pallide lutescens flexuosum flaccidum*, sericeum *ramulis* breviusculis apice breviter cuspidato *curvatis turgidulis mollibus*; folia *caulina* laxe conferta, madore patula, e basi paulisper decurrente rotundata vix impressa anguste vel latius lanceolata in acumen longiusculum acutatum denticulatum, sæpius semitortum cuspidata, *irregulariter et indistincte sulcata*, profunde concava, margine e basi ultra medium valde revoluto remote et obsolete denticulata, nervo angusto in acumine dissoluto, cellulis ubique pallidis incrassatis angustissimis linia-aribus striatulis; perich. externa minora ligulate ovata obtusata, interna a basi late vaginata laxe elongate reticulata pallidissima tenerrima flaccidissima sensim in acumen valde elongatum denticulatum angustius sed elongate reticulatum protracta erecto–patula enervia; *theca in pedunculo perbrevi* rubente sæpius valde flexuoso supra basin infimam valde tuberculosa erectiuscula vel vix inclinata *subito arcuata cylindrica* glabra badia, ore constricto brunea, calyptra firma truncatula levi; perist. d. ext. robusti rubiginosi valde cristate trabeculati albide limbati, int. in membrana lutea tenera valde reticulata, ciliis singulis vel binis.

Ab *Hypno sericeo* proximo criteriis accuratius laudatis jam certe distinctum pulcherrimum.

Patria, *Oregon*, ubi Rev. R. D. Nevius secus Portland primum legit, vere, 1873.

This beautiful Homalothecium seems to be quite frequent in Oregon. In every lot of mosses received from different localities in the eastern part of the State specimens of it have been found mixed with Neckera Menziesii, Mnium Menziesii, undoubtedly growing with those mosses on rich ground or upon moss-clad rocks in shady places.

2, Bryum Atwateriæ, C. Müller, *n. spec.*, *Bryum alpinum* simillimum, e lutescenti-viridi purpurascens, robustum, strictum, ramis longiusculis obtusatis uncialibus; folia caulina dense imbricats madore vix patula, e basi angustiori latiuscule ovata ligulate obtusata, profunde cochleariformia concava apice subcucullata, margine e basi usque ad medium vel ultra valde revoluta integerrima, firma, nervo e basi longe fibroso crasso flavido ante apicem evanido cellulis ubique firmis pulchre lutescentibus parvis et inanibus basi infima rectangularibus vel hexagonis laxioribus hic illic purpurascentibus.

Patria, California, prope Yosemite Falls, in terra saxosa. Mrs. E. Atwater leg. æst., 1873.

About the particular habitat of this rare moss the discoverer makes the following remarks, which might serve a future visitor interested in botany to find more and *fructiferous* specimens:

"It was found at the foot of a tree on the rocky ground at the foot of the fall, where it was only temporarily the recipient of the spray from the same, when the wind was in a favorable direction. Earlier in the season, at a higher stage of the water, the locality would doubtless have received constant moisture from this source."

§ 107. Publications.—1. *Report of the Botanist*, Charles H. Peck, published April, 1874, in advance of the Twenty-sixth Annual Report on the New York State Museum of Natural History for the year 1872. The industrious State Botanist here continues his contributions to the Fungology of the State, and makes some interesting observations in regard to some of the higher plants. Twelve of the latter, including two *Charas*, are reported new to the State, six of the twelve from Long Island, and heretofore mentioned in the BULLETIN, are to be found in Miller & Young's Catalogue. The others are: *Pycnanthemum pilosum*, Nutt, Wayne Co.; *Asplenium montanum*, Willd., Ulster Co., and the two *Charas*, *C. hispida*, *C. Hedwigii*, introduced; *Torilis anthriscus*, Gaert, Buffalo; *Chenopodium polyspermum*, L, Onondaga County. We notice that Mr. Gerard's *Peziza chrysophthalma* has again met with a typographical misfortune—2. *Transactions of the Massachusetts Horticultural Society* for the year 1874, Part I.; devoted to Discussions on various subjects connected with Horticulture, in which the Orchids have a large and interesting share —3. *Psyche*, Organ of the Cambridge Entomological Club, edited by B. Pickman Mann, Nos. I. to IV., May to August. Each No. will contain at least four pages, price one dollar a year. This little periodical follows the example of our BULLETIN, beginning on a small scale, intending to take root and grow. The first No. con-

tains a valuable map of the limits of the alpine and subalpine districts of the White Mountains.

§ 108. **Negundo aceroides in New York.**—An important addition to the flora of New York has recently been made in the discovery of Negundo aceroides, Moench, in a small piece of woods on the bottom land of the Inlet valley, about two miles south of Ithaca. There are a dozen or more plants, the largest being 30 to 40 feet in height. They were first observed by one of our botanical students, Mr. J. C. Branner, while out collecting. So far as I am able to learn, this tree has never before been recorded as growing spontaneously within the limits of the State. A. N. Prentiss.

Cornell University, *June* 25, 1874.

SCIRPUS, L.—**S. planifolius**, Muhl.; Palisades, common, *Austin;* Richmond Hill, L. I., *Ruger.*—[*S. subterminalis*, Torr.; not reported in our limits, but to be looked for, as it is found in Suffolk Co. and the New Jersey Pines.]—**S. pungens**, Vahl; common; N. Y. I.—**S. Olneyi**, Gray; Junction of E. R. R. & N. R. of N. J., *Allen.*—**S. validus**, Vahl; common.—**S. debilis**, Pursh.; N. J., *Torr. Cat.;* Long Island, *State Flora*, near Greenwood Cemetery, *W. H. L.;* near Jamaica Pond, Ridgewood Aqueduct, *Ruger;* Closter, not rare, *Austin;* Morristown, *W. H. L.*—**S. maritimus**, L.; common; N. Y. I.; var. **macrostachyos**, Mchx.; *Torr. Cat.;* Suffolk Co, *Miller & Young.*—**S. atrovirens**, Muhl.; common; prolific variety at East Williamsburgh, *Ruger.*—**S. polyphyllus**, Vahl.; Staten Island?; Suffolk Co., *Miller & Young.*—**S. lineatus**, Mchx.; Bergen Point, *W. H. L.;* Palisades, *Austin*—**S. Eriophorum**, Mchx.; common; var. **laxus**, Bergen Point, *W. H. L.;* Long Island, *Ruger.*

ERIOPHORUM, L.—E. Virginicum, L.; common, but not reported from N. Y. I.—**E. polystachion**, L.; Closter, common in South Jersey, *Austin;* Long Island, *Torr. Cat.;* Suffolk Co., *Miller & Young.*—**E. gracile**, Koch, Var. **paucinervium**, Engelm.; New Durham Swamp (E. angustifolium), *Torr. Cat.;* Centreville, &c., L. I., *Ruger;* Suffolk Co., *Miller & Young.*

FIMBRISTYLIS, Vahl.—**F. spadicea**, Vahl., var. **castanea**; Hoboken, *Torr. Cat.;* Hackensack Meadows, *Allen;* Salt marshes near N. Y., *State Flora;* N. Y. I., *Morris;* Suffolk Co., *Miller & Young.*—**F. autumnalis**, common; N. Y. I., *Morris.*—**F. capillaris**, Gray; common; N. Y. I., *Morris.*

RHYNCHOSPORA, Vahl.—**R. Torreyana**, Gray; Barrens of New Jersey, perhaps within our limits.—**R. fusca**, Rœm & Schultes; Moriches, L. I., *State Flora;* New Lots, L. I., *W. H. L.;* Suffolk Co., *Miller & Young.*—**R. gracilenta**, Gray; South New York and New Jersey, *Gray's Manual;* Philipstown, Putnam Co., *State Flora.*—**R. alba**, common; N. Y. I., *Morris.*—**R. capillacea**, Torr.; Putnam Co., *Dr. Barratt in State Flora*, perhaps in our limits.—**R. glomerata**, Vahl; common; N. Y. I., *Morris*—**R. cephalantha**, Torr.; East New York, *W. H. L.;* Islip, *State Flora;* Suffolk Co.,

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Miller & Young; New Jersey, *Austin, &c.*—*R. macrostachya,* Torr., and *R. nitens,* Gray, have been found in Suffolk Co., but probably not in our limits.

CLADIUM, P. Browne.—**C. mariscoides,** Torr.; common; N. Y. I., *Morris.*

SCLERIA, L.—**S. triglomerata,** Mchx.; Newark Meadows, *Torr. Cat.;* Chatham, N. J., Rockaway, L. I., *W. H. L.;* Closter, rare, *Austin.*—**S. reticularis,** Mchx.; Suffolk Co., *State Flora, Miller & Young.* —**S. laxa,** Torr.; "Sandy swamps, L. I., common in pine region of N. J.," *State Flora; Le Roy.*—**S. pauciflora,** Muhl.; *Le Roy;* Rockaway, L. I., *W. H. L.* —**S. verticillata,** Muhl.; Hackensack meadows, *Allen,* 1863; Trains Meadows, Woodside, L. I., detected on a field day of the Club, Aug. 27 last, by *Mr. Ruger,* who pointed out that the lower sheaths were retrorsely hairy, and a tuft of it decidedly fragrant. It grows in the same locality with *Frangula:* apparently annual.

N.B. We do not like to enter upon the difficult genus *Carex* without more help.

§ **108. Erodium cicutarium,** L'Her.—In one of the earlier numbers of the BULLETIN for 1873, Prof. James Hyatt reported a field in Poughkeepsie as a new station for this plant. Having learned the exact locality from Prof. H., I visited it a few days ago, and found thousands of the plants in flower, densely carpeting a space at least sixty or seventy feet square, at the spot he indicated, and also various small patches at various points in the field, somewhat removed from the original station. The plants are well established, and have evidently been growing in their present locality for years.

W. R. GERARD.

June 11, 1874.

§ **109. Solea concolor,** Ging.—Last May, I detected *Solea concolor,* Ging., in a cold mountainous woods about a mile from the village of Pine Plains. It was growing very luxuriantly—many of the stems being all of three feet in height—and covered several acres of Ground, almost to the entire exclusion of other herbaceous Plants. Recently I gathered a number of specimens in fruit, which have in full the peculiar characteristics of the violet order.

With the exception of the single specimen in fruit, detected in 1864 by Mr. I. H. Hall at Tarrytown, I believe it has not been hitherto reported as found east of Palmyra. This station, in addition to the fact that the plants grow very abundantly, is yet east of Mr. Hall's at Tarrytown, being only about eight miles from the Connecticut State line. Pine Plains is in the north-eastern part of Dutchess County, about twenty miles northeast of Poughkeepsie, and is a few miles south of the parallel of latitude (the 42d) which forms the northern boundary of Pennsylvania.

In the next month's Bulletin, I shall give a list of those plants growing about Pine Plains which are generally regarded as scarce or rare, and of those whose usual habitat is reported generally (particularly in the "*State Flora*"), to be to the north or the south of this latitude. A few of them, as will be seen, without being so marked as *Solea concolor,* Ging., are, nevertheless, usually thought

to be almost as great strangers in this—the south-eastern part of the State. L. H. HOYSRADT.

Pine Plains, N. Y., Sept. 21, 1874.

§ **110.** Publications.—We have received: 1. *The American Garden*, New Series. Vol. I, No. 1, a Monthly Illustrated Journal, Devoted to Garden Art, edited and conducted by James Hogg. Beach Son & Co., Publishers, 76 Fulton St., Brooklyn, N. Y.—2. *Revised Catalogue of North American Ferns*, compiled by Wm. Edwards, South Natick, Mass., Aug. 1874. Price of Catalogue, 25 cents per dozen. The varieties "peculiar to North America" are marked with an asterisk. Is not *Pellæa Wrightiana* one of these?—3. *Psyche*, No. 5.—4. A prospectus of a *Mycotheca Universalis*, by F. Baron Thumen, Bayreuth, Bavaria. Three centenaries, "by no means more," of exsiccated fungi, "loosely wrapped in paper envelopes," will be issued yearly at 15 francs a centenary.

§ **111. Block Island** has not been well explored. Dr. Robbins was there in Sept. 1829, and made discovery of some rare New England plants, and I have been there occasionally since.

Rarities—1. The large white lily of the pond near the Spring House is probably *Nymphæa tuberculosa*, Paine, *S. T. O.*, 1874.—2. *Arenaria squarrosa*, Mchx., *Robbins*, 1829.—3. *Myriophyllum scabratum*, Mchx., *Robbins*, 1819, *S. T. O.*, 1848! and Point Judith, 1848.—4. *Hydrocotyle interrupta*, DC., 1848, *S. T. O.*—5. *Anagallis arvensis*, L., 1848, *S. T. O.*, also Newport R. I., *Geo Hunt.*—6. *Blitum rubrum*, Reich. (*B. maritimum*, Nutt.), *S. T. O.*, 1848. —7. *Leptochloa fascicularis*, Gray, *Robbins*, 1829; *S. T. O.*, 1848.

Fine specimens of *Rumex maritimus*, L., and extreme glaucous forms of *Polygonum glaucum*, Nutt., occur here. S. T. O.

Providence, Sept. 12, 1874.

§ **112 Catskill Ferns.**—During a short stay at the Catskills, recently, I found a locality of the Aspidium aculeatum, *var.* Braunii, in the Clove ravine. I do not know whether the locality is new or not. Near by I found a limited locality of Pellæa gracilis, *Hook.* This locality of the Aspidium aculeatum, *var.* Braunii, seems to consist mainly of thrifty new plants: no plants appearing to be more than three years old. Another station of this fern was also discovered in the same ravine, at about the same time, about half a mile farther down, by Miss Emily Jenkins, of New York City. This last mentioned station seemed to consist almost exclusively of very young plants, quite numerous, and all very thrifty. In the same ravine, within the space of a very few rods, I detected the following nineteen species of ferns: Polypodium vulgare, *L.*, Pteris aquilina, *L.*, Pellaea gracilis, *Hook*, Asplenium Trichomanes, *L.*, A. filix-foemina, *Bernh.*, Phegopteris polypodioides, Fée, P. hexagonoptera, *Fée*, P. Dyopteris, *Fée*, Aspidium Thelypteris, *Swartz*, A. Noveboracense, *Swartz*, A. Spinulosum, *Swartz*, (small *var.* of A. dilatatum, *Swartz*), A. marginale, *Swartz.*, A. acrostichoides, *Swartz*, A. aculeatum, *Swartz*, *var.* Braunii, *Koch*, Cystopteris fragilis, *Bernh.* Onoclea sensibilis, *L.*, Woodsia Ilvensis, *R. Br.*, Osmunda Claytonia, *L.*, O. cinnamonea, *L.* Outside of the ravine I found also Osmunda regalis, *L.*, and Dicksonia punctilobula, *Kunze;* and

I cannot think that the list would stop here if I had had time to hunt farther. At several spots in the ravine one could count eight species within reach of his hand.

I could not help noticing that the Phegopteris polypodioides and the P. hexagonoptera approached each other in form much more nearly than I had been accustomed to see in Western N. Y.; and I was almost in doubt whether both forms in the Catskills are not the same species. As seen in Western N. Y., there seems to be a wide difference between them: not only in form and size, but in the several amounts of potash contained in the ashes of the two respectively. The P. hexagonoptera (as in a previous note of mine in the BULLETIN) seems to burn without leaving any other residue than a white globule of carbonate of potash. Still, the matter needs further observation and experiment.

I also found, under Haines' Falls, one specimen of Microstylis monophyllos, in fruit. ISAAC H. HALL.

36 Pine Street, N. Y., Sept. 2.

§ 113. **Vandalism.**—Last season a lady discovered in Hunter township, Greene Co., N. Y., the only locality known in the State of the beautiful climbing fern, *Lygodium palmatum*. The news got abroad and we are told that the plant is now completely extirpated. The true lover of the vegetable world is not guilty of such thoughtlessness, and often refrains from gathering a rare specimen, or at least the root of a perennial, from a nice sense of what appears a loving mercy to the plant, but is in reality a refined humanity. He himself may expect never to revisit the spot, but he thinks that some other eye may be delighted as his has been. We have friends who are very sensitive on this point. It would be well to avoid communicating the knowledge of rare localities to the undiscerning, or to open their eyes to the wickedness of destroying the helpless strangers. Connecticut has a law protecting the climbing Fern.

§ 114. **Desmodium and Lespedeza.**—I was much interested by the notice in the April number of the Bulletin, § 89, of *Desmodium humifusum*, Beck. Twelve years ago I found it in circumstances entirely favorable to its being a hybrid of *D. rotundifolium* and *D. rigidum*, or *D. Dillenii*. All three, if I mistake not, growing abundantly with it. Two plants in separate localities were all I could find, and though I have repeatedly searched for it since, it has never been found again. It seems to me also very plain that *Lespedeza Stuvei* is also a hybrid between *L. violacea* and *L. hirta*. Its appearance and situation, growing with both of the above as I have observed it both in Providence, R. I., and Plymouth, Mass., carry strong conviction to my mind J. W. CONGDON.

§ 115. **New Fungi,** by W. R. GERARD.—*No. IV.*

Stilbum aurifilum. (*n. sp.*)—Stems slender, thickened at base and apex, composed of smooth, orange-yellow fibres. Head globose, white, persistent after the plant is dried.

Springing in dense numbers from a web-like mycelium running over the pores of *Daedalea unicolor*. Stems about one-twentieth of an inch high.

Poughkeepsie, Aug. and Sept.

Ceratium insociabile (*n. sp.*)—Clavulae delicate, white, resembling prickles, forming a fascicle; spores oblong, hyaline .0002′ long.

On under surface of leaves of *Smilax herbacea*. In the very few specimens I have found the fascicle has been solitary and situated on the mid-vein, exactly in the centre of the leaf.

Poughkeepsie, summer, rare.

Æcidium Chelonis, (*n. sp.*)—Spots small, circular, greenish-yellow, peridia few, circinating, margin fimbriate, at first white then yellow; spores globose, orange-yellow.

On under surface of leaves of *Chelone glabra*.

Poughkeepsie, June.

Æcidium minutissimum. (*n. sp.*)—Spots flesh-colored. Perithecia very minute, sparse (one or two only on each spot). Spores chrome-yellow.

On leaves of *Hypericum mutilum* in company with *Uromyces Hyperici*. The plants are so minute that they can scarcely be seen except with the lens.

Poughkeepsie, Oct. and Nov.

Peziza nigropunctula. (*n. sp.*)—Cups stiped, black, minute; Asci clavate, .0005′ long, spores hyaline, oblong, .0002′ long.

On newly-cut chips of oak wood. Poughkeepsie, Summer.

Triblidium dealbatum. (*n. sp.*)—Scattered over pallid spots: perithecia elliptical, black, without striæ; lips at length widely gaping and exhibiting a somewhat rugose black disk. Asci clavate; spores broadly oval, often slightly obovate, about 8-septate .0015x-.0006′, the cells filled with granular matter, very pale straw color almost hyaline.

On bark of living *Syringa Vulgaris*. Perithecia very small and often triangular in outline, like those of T. *hiascens*, B. & C. The pallid spots over which the plants are scattered give a peculiar look to the trunks.

Pleasant Valley, N.Y.

Hysterium (*glonium*) **parvulum.** (*n. sp.*)—Perthecia roundish or elongated, obtuse at the ends, smooth, black, without striæ; spores oval, hyaline, 1-septate .0002′—.0003′ long.

Growing in parallel series in denuded wood of *Alnus serrulata*. Poughkeepsie.

Dothidea Linderæ. (*n. sp.*)—Stroma black, erumpent, roundish or oblong, often confluent, surface convex, papillate. Asci? Spores oblong, pale brown, 1-septate, .0006′x.0002′.

Bursting through bark of dead *Lindera Benzoin*.

Diatrype exasperans. (*n. sp.*)—Perithecia subglobose, immersed in an olive-green stroma which elevates the bark and protrudes through, forming elongated pustules. Asci cylindrical. Spores broadly oval, obtuse 1-septate, constricted at the septum, dark-red brown, .0006′x.0003′.

On back of *Fagus ferruginea*, giving it a very rough appearance.

New Paltz Landing, N. Y.

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§ 116. **Grasshoppers.**—No ornamental plant is more frequently found in country gardens and escaped to the roadside than *Hemerocallis fulva*, L., the common Orange Day Lily, so called, because the flowers which open in the morning close at or toward night. They are to be seen next day twisted up, and remaining for a day or so, shrivel up and fall off. On opening one of these twisted flowers one morning in July, I was surprised to find in it a good-sized and vigorous grasshopper, who was doubtless equally surprised and rejoiced to be delivered from his prison. I had often found the dead bodies of grasshoppers clinging to the tops of grass culms or other slender plants, and supposed that the insect had climbed, in its feeble old age, to enjoy the warmth of the sun or escape the chill dews nearer the ground. The following evening being cool (it was in the northern part of the State) and clear, and promising a cold night, I examined the flowers about closing, and in two cases found a grasshopper resting near the bottom of the cup. I looked for them again in the morning, but they had made their escape, perhaps alarmed by the gradual closing of the flower. The remaining evenings of my stay were not clear, nor dewy, and I found no more grasshoppers in the flowers. W. H. L.

§ 117. **Helianthus tuberosus, L.**—We have referred in another article to the question of the origin of the common Artichoke. We condense what DeCandolle says on the subject:

The root has been cultivated in Europe since the beginning of the seventeenth century, as coming from America. Columna, one of the first to speak of it, saw it in the Farnese garden, and names it Aster *Peruanus* tuberosus. Bauhin, in 1619, calls it Chrysanthemum latifolium *Brasilianum*. Parkinson gave it the name of Battatas *Canadensis*. Several authors of this period give the vague epithet *Indicum*. Linnæus adopted the opinion of the Canadian origin, which is decidedly an error, at least as to Canada properly so called, but the term might very well apply to the more southern regions formerly vaguely comprised under the name of Canada. The plant has not been found wild anywhere. From its mode of life it ought to come from a temperate climate, and, according to all the evidence, from America. I doubt its being a native of Brazil, for of forty species described in the *Prodromus* there is not one of that country. The Peruvian origin has in its favor the name at the time of its introduction, and the fact that there exist two or three Helianths in the chain of the Andes. Nevertheless, Humboldt did not see the species cultivated in any part of the Spanish colonies, and the great majority of the species of the genus come from Mexico and the United States. Martius did not see the Artichoke in Brazil.

According to Dr. Gray, the best guide in North American botany, the probable original is our *H. doronicoides*, which has a "root stock thickening into elongated tubers." Man. 5th edit., page 258.

§ 119. **Cephalanthus occidentalis**, L.—A number of years ago, when I was beginning to botanize, and first found this plant, on the outlet of Owasco Lake, where it grows luxuriantly, I found, on examining the specimens I had gathered, that they had all the flowers, without exception, with a 5-parted corolla It puzzled me greatly, though I finally made it out; but never since then have I seen it with any 5-parted corollas. Later observation has made me familiar with such freaks, but the fact seems worth recording.

I cannot help observing here, that wherever I have seen this plant, except when cultivated, I have always found *Saururus cernuus* growing near it. In the locality above mentioned, particularly, the Saururus grows in great luxuriance, filling the little bays and coves in the outlet; so that the waves from a passing boat make it nod and undulate, looking much like a field of grain waving in the wind.

This again reminds me that Mr. Bower has frequently told me that he never found *Schizæa pusilla* far away from *Lycopodium Caroliniauum*. This association of plants, of which doubtless many more instances might be given, is frequently an index showing where to look for a desired specimen. I. H. H.

§ 120. **Asclepias verticillata**, L.—Mr. F. A. Pollard has given us a bit of this plant which he gathered at High Bridge, the 24th of last August. Mr. O. W. Morris had previously found it on New York Island, but it has not hitherto been reported from here.

§ 121. **New Fungi**, by E. C. Howe, Yonkers, N. Y.—*No. II.*

1. **Agaricus** (Amanita) **onustus**, *n. sp.*—Pileus 5-6 in. broad, brownish gray, clothed with dust colored warts which easily rub off (persistent about the dark centre), leaving spots of a deeper brown; margin thick, not at all striate; stem 3 in. high, 1 in. thick, attenuated upwards, enlarging as it enters the cap, farinose, ringless, white, stuffed, concentrically squamulose below, the large bulb firmly rooting. Flesh and gills white, the latter changing to fulvous hue in drying. Slightly acrid. Stem very glutinous, at length hard and fibrous. June. Deeply shaded grass land.

2. **Agaricus** (Amanita) **soleatus**, *n. sp.*—Pileus 2–2½ in. broad, fulvous brown, somewhat uneven, with patches of tomentum, sprinkled with a fine, dingy, yellow powder; margin thin, striate; stem 2 in. high, 3–4 lines thick, ringless, smooth, attenuated downwards, fistulose; volva 1 in. broad, even, entire or with a shallow sinus; gills whitish, changing to a cinerous brown in drying. June. Woods.

3. **Dothidea abnormis**, *n. sp.*—Stroma, irregular, carbonaceous, uneven; asci, long, cylindrical, containing 8 oblong-elliptic, brown, uniseriate spores. The basal portion often extended into a thin layer. Resembles Hypoxylon. On *Smilax rotundifolia*.

4. **Diatrype** (Diatrypella) **prominens**, *n. sp.*—Prominently raised above the inner bark, the ruptured epidermis adherent, sometimes lobed, brown, black, or gray, subrotund, often confluent; perithecia globose, covered with a whitish stroma; ostiola large, black; asci clavate or subfusiform; sporidia numerous, curved, yellowish, without nuclei. Bark of *Platanus*. On fallen wet bark the asci are green and distorted.

4. **Hygrophorus Peckianus,** n. sp.—Odorous, rather firm, gregarious or subcæspitose; pileus fleshy, convex or slightly depressed in the centre, smooth, hygrophanous, fuliginous when moist, paler or buff-brown when dry, the margin decurved and sometimes wavy; lamellæ subdistant, broad, thick, arcuate, decurrent, pallid when young, becoming darker with age; stem smooth, stuffed or hollow, subflexuous, often compressed and attenuated below, colored like the pileus; spores subglobose, rough, .0002 in. in diameter.

Plant 1-2 in. high, pileus 5-10 lines broad; stem about 1 line thick.

Ground under *Pteris aquilina.* Lake Pleasant, August.

Odor quite strong, resembling that emitted by some species of Golden-eyed lace-wing flies (Chrysopha). The color of the moist plant is almost exactly like that of *Lactarius fuliginosus*, Fries. Related to *Hygrophorus Cantharellus*, Schw.

5. **Microspnæria Viburni,** *Erysiphe Viburni*, Schw.?—Mycelium web-like; conceptacles scattered, globose; appendages less than 20, longer than the diameter of the conceptacles, dichotomously branched, the tips slightly or much curved; sporangia 6–10, with usually 6 spores. *M. sparsa*, Howe. Leaves of *Viburnum.* The older name is here restored.

6. **Uromyces Ari-Virginici.** *Uredo Ari-Virginici*, Schw., *Uromyces Peltandræ*, Howe.—Sori oblong, often confluent; spores subglobose, irregular, brownish, pedicels sometimes rudimentary. Leaves of *Peltandra* and *Arisæma.* Here also the older name is restored.

7. **Sphæria platanicola,** *n. sp*—Perithecia seated within the inner bark, scattered, minute, black, subconical, the apex somewhat compressed, just piercing the epidermis; asci cylindrical, or subclavate; spores uniseriate, light brown, about 3-septate, strongly resembling those of *Cucurbitaria elongata*, Grev. Branchlets of *Platanus.*

§ **122. Lechea.**—I have for some years been engaged in collecting specimens of this genus, which promises a greater variety of specific forms than has generally been suspected. I think Michaux's L. racemulosa and L. tenuifolia will have to be restored, and suspect that there are several other species confounded under the name of L. minor.

My principal object in writing the present note is to ask contribution or loan of specimens of Lechea from those who may have noticed and gathered varieties of this genus. I desire to learn, as nearly as possible, the extent of distribution of each form. In Florida, near Tampa Bay, Rugel found a very rough species, with many stamens, having short and broad leaves, which Shuttleworth in Dr. Gray's specimen had labelled *L. divaricata.* Beyond that in Dr. Gray's herbarium, I know of only one other specimen, which is in Paris.

A number of botanists have most kindly supplied me with specimens, but there are many parts of the Union and of Canada from which no Lecheas have reached me. I have none from Western New York, and few from the Southern Alleghanies and the adjacent States, where Rafinesque claims to have seen several peculiar forms.

Does *L. major* grow in Canada?

Specimens of Lechea are generally best gathered in the fall of the year, when the fruit is mature and the root leaves are forming or formed. I have, however, gathered good specimens in this latitude as late as December.

Wm. H. Leggett.

224, E. 10th St., New York.

§ 123. New Publications.—1. *The Ornamental and Useful Plants of Maine. Part I.*, by F. Lamson Scribner, B. S. Printed for the author, Augusta, 1875. This is a popular account of the "ornamental and useful" plants of Maine, with a number of good illustrations, following the order of Gray's Manual, and reaching to the end of Caprifoliaceæ. We hope Mr. Scribner will feel encouraged to complete his charming and useful work—.2. A copy of the *Springfield Republican*, which we cannot put our hands upon, contained gratifying evidences of the vitality of the *Connecticut Valley Botanical Association*. 3. Darlingtonia Californica, an Insectivorous Plant, read at the Hartford meeting of the American Association, by Wm. M. Canby, Philadelphia, The Gardener's Monthly Print, with an engraving of the plant: a valuable paper, supplementary to the interesting observations on *Sarracenia*.—4. *The American Garden*, New Series, Nos. II. & III. We observe that the editor quotes very largely from the Bulletin, and in doing so mentions our Club in a manner trying to its modesty. The Garden contains much interesting reading; the articles on Hardy Ferns and Aquatic Plants, for example, will interest cultivators of our indigenous plants. According to De Candolle (Geog. Bot. p. 821), the *Nation* is right in doubting the Brazilian origin of *Helianthus tuberosus*, but why did it not, while parading its botanical learning, give its source, as requested? It seems to us that in this way the credit of "literary men" would have been better maintained.

§ 124. Jasminum revolutum, *Sims.*—Prof. D. S. Martin has written us a note, calling attention to an error in Gray's Field, Forest and Garden Botany, in regard to the number of ovules in each cell of Jasminum. In examining a large number of blossoms from a bush of *J. revolutum*, he found that "each cell contained two well developed ovules. One or two of the flowers had three celled ovaries, "two of the cells having two ovules, while in the third but one was distinctly observable."

It is not surprising that, in so condensed a hand-book, covering so wide a field, this exception should have been overlooked. The deviation in the number of cells is a variation like that in *Cephalanthus* mentioned above by Mr. Hall.

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The Club meets regularly the last Tuesday of the month in the Herbarium, Columbia College, at 7½ P. M.

§ 125. **The Club at Central Park.**—On Saturday, Nov. 7th, the Club visited the conservatory in Central Park, where the manager, Mr. Robert Demcker, a brother member, received them with the greatest cordiality, and was unwearied in pointing out and explaining his treasures. Mr. Ruger has supplied us with the following notice of some interesting plants.—**Plants under shelter:** *Coffea Arabica*, in fruit; *Siphonia elastica*, India-Rubber tree; *Hura crepitans*, called "Monkey's Pistol," from the loud noise made by the explosion of the ripe fruit; *Theophrasta imperalis*; *Hippomane Mancinella*, Manchineel tree (by some called the "Upas tree.") The true Upas tree, *Antiaris toxicaria*, is a congener of the Breadfruit tree, Artocarpus incisa, (but the Manchineel is nearly or quite as poisonous as the Upas); *Cyperus papyrus*, in fruit; *Eucalypti* species; *Aralia Japonica*, in flower; *Aralia papyrifera*, of which the Chinese make their rice paper, in flower; *Mespilus Japonica*, the Chinese Medlar, in fine flower; several species of *Peperomia* in flower.—**Plants out-doors:** *Gymnotrix Japonica*, a Japanese grass, growing also around the fountain in Union Square, in fruit; *Escholtzia Californica*, in flower; *Sanvitalia procumbens*, in flower.

§ 126. **New species of Fungi,** found at Newfield, N. J., by J. B. ELLIS.

1. **Agaricus** (Lepiota) **noctiphilus.**—Subcespitose, pileus carnose, cylindric-hemispheric, becoming convex, and even concave, and rather broadly umbonate, sulcate-striate around the margin, the striæ finally extending nearly to the centre, dotted, especially in the disk, with fine black scales, which may be easily rubbed off. Flesh white, thin, almost disappearing towards the margin; gills hardly crowded, rounded behind, free, margins serrulate, color white, stem slender, about one inch long; stuffed, loosely farinose-squamose, annular marked above the middle and surrounded by a distinct black line at base, spores short, obl. about .0002′ long. Pileus not over 1′ across; Mycelium abundant, white.

On a sloping bank of earth in an unfinished cellar, July.

2. **Agaricus** (Tricholoma) **microsporus.**—Pileus $\frac{1}{2}$—$\frac{3}{4}$ across, carnose, thin, slightly rugose, covered with a glaucous bloom, becoming faintly zonate in drying, dull reddish-purple; gills *deeply* and *narrowly* sinuate and narrowly attached at the summit of the stem, hardly crowded, about $\frac{1}{8}$″ broad, pale purplish at first, becoming reddish-yellow; stem about 1′ long and 1 thick, fistulose, finely pubescent under the lens, with long, spreading, pale-yellowish hairs at base. Spores minute, nearly round .00015′—.0002 in diameter.

Among sphagnum in the Swamp. July—October.

3. **Agaricus** (Clitocybe) **trullissatus.**—Pileus carnose, plano-convex, at length depressed in the centre, innate, fibrose-squamose becoming smoother in the disk, margin thin; gills unequal, not crowded, coarse and thick, adnate with a decurrent tooth, at length white-pulverulent, purple-violet at first, becoming dark brick red. Stem stuffed, fibrillose, with a long club-shaped base penetrating deeply into the sand. Spores large, cylindric-oblong .0006′ to .0008 long.

In old sandy fields, Sept.—Oct. The interior of the stem in the young plant is, like the gills, violet-purple, and the club-shaped base is covered with a tomentose coat, to which the sand adheres tenaciously.

Related to *A. laccatus* and *A. ochropurpureus*, B.

Hymenochæte agglutinans.—Of rather loose texture and of a light yellow color at first, becoming firmer and of a light tan color or rufous tint as the bristles are developed; closely adnate with a determinate margin which is tomentose at first; forming orbicular or elongated patches or sometimes entirely surrounding the twig or limb on which it grows for an inch in length.

Common in Autumn in swampy thickets on *Andromeda, Vaccinium*, &c., without much discrimination, fastening the stems or branches together wherever a dead twig or branch lies in contact with a living one; turns black and dries up during the winter.

Helotium naviculasporum.—Stipitate, firm, white, becoming pale yellow; disk convex about 1-20′ across, stem about the same length; asci rather broad; paraphyses slightly thickened above; sporidia about .001′ long, broad boat-shaped, filled with granular matter.

On old leaves decaying in stagnant water, July.

Exobasidium discoideum.—Fleshy and firm, but of looser texture within; at first turbinate and concave above, but the margin soon expands so that the fungus takes the shape of a double convex lens 1′—2′ across and ½′—¾ thick; pale green and smooth beneath, hymenial surface soon white pruinose, but assuming a pale lilac tint in drying. Spores as in *E. Andromedæ*, Pk., obscurely uniseptate and bent at one end, about .0008′ long.

Attached to the under side of the leaves of *Azalea viscosa*, July.

Sphaeria pyriospora.—Perithecia nestling in the inner bark, scattered or subconfluent, often seriately arranged, rupturing the epidermis longitudinally, white within becoming black; ostiola slightly prominent, minute; asci cylindric, turgid; sporidia long pyriform, about .0012′ long, crowded in the asci. Spermatia oblong minute.

On dead branches of *Chionanthus Virginica*, May.

Gymnosporangium biseptatum.—On branches of White Cedar. Appearing in April, bursting through the epidermis in little reddish-chestnut colored velvet-like patches which, about the middle of May, pass into the tremelloid state, swelling out into gelatinous masses the size of large peas; not so distinctly foliaceous as in *G. Juniperi*. Spores long pedicellate, mostly biseptate.

The portion of the branch occupied by the fungus becomes enlarged, swelling out on all sides and increasing in size from year to year till finally branches no larger than a pipe stem bear oblong swellings an inch or more in diameter and four or five inches long. Sometimes the fungus attacks the trunk of a small tree or some of the larger branches, causing swellings of a much larger size.

§ 127. Flora of Pine Plains, Dutchess Co., N. Y., by LYMAN H. HOYSRADT,—*No. I.*

The following list comprises some of the more uncommon plants which I have detected up to this time growing within five miles of

the village of Pine Plains. The physical features of the township are sufficiently varied to give this section certain botanical advantages not usually possessed by many others. First, there is Stissing Mountain, which consists of two adjoining peaks, or gradual elevations, one of them rising above the plain to the height of nearly a thousand feet. On or near its nearly naked summit grow Potentilla tridentata, Ait., Betula papyracea, Ait., Prunus pumila, L., etc. The mountain, which is about six miles in length, has no connection with any other range—being not quite equi-distant from the Taghkanic, Catskill and Fishkill ranges. Our hills, with exception of the mountain, are mostly limestone—the plain being a sandy loam. There are over a thousand acres of untilled marsh land in town, besides quite a number of large cold swamps; in the marshes flourish Betula pumila, L., Blephilia hirsuta, Benth., Andromeda polifolia, L., Myrica Gale, L., Menyanthes trifoliata, L., and a number of other plants unusual for this latitude. All this, with five or six good sized ponds and three large creeks flowing through the township—making a section diversified with mountain, plain, hills, valleys, ponds, creeks, swamps, and marshes—cannot fail to offer a most inviting field to the active botanist.

I take, I trust, only a pardonable pride in the goodly number of Ferns, Solidagos and Potamogetons—my favorite order and two favorite genera—which grow here within two and a half miles of the village. Of Solidagos I have already detected, within the above small circuit, twenty different species, and thirty-three species of Ferns, besides three or four varieties of the latter. In a future article, I shall give their names in full.

Clematis verticillaris, DC.; Frequent; common in the ravines of Stissing Mt.

Anemone cylindrica, Gray; rare.

Hepatica acutiloba, DC.; rare; sparingly on back slope of Stissing Mt.

Ranunculus multifidus, Pursh.—not common; in streams on Stissing Mt.

Coptis trifolia, Salisb.; common.

Caulophyllum thalictroides, Michx.; rather common; abundant along base of Mt. Ararat, with Solea concolor, Ging.

Podophyllum peltatum, L., not rare.

Sarracenia purpurea, L., quite common.

Corydalis aurea, Willd., frequent on Stissing Mt.

Fumaria officinalis, L., escaped from gardens.

Dentaria maxima, Nutt., not common; rich soil, in deep ravines of mountain.—D. diphylla, L., and D. laciniata, Muhl., both very common.

Arabis hirsuta, Scop., A. lævigata, DC., and A. Canadensis, L., are all common on Stissing Mt. and frequent on wooded hills.

Lepidium campestre, L., rare.

Solea concolor, Ging., abundant on slope of Mt. Ararat.

Viola Selkirkii, Goldie, near or on Mt. Ararat, M. E. V. (?)

Hypericum ellipticum, Hook., in Wappinger's Marsh.

Silene noctiflora, L., frequent along fences and roadsides. S. inflata, Smith, becoming common along our two railroad lines.

Stellaria longifolia, Muhl., rare, Silvernail marsh. S. borealis, Bigelow, frequent; more common than S. longifolia.

Claytonia Virginica, L., not common; grows along Shekomeko creek and Roelif Jansen's Kill.

Malva moschata, L., not rare in our fields—an escape.

Impatiens pallida, Nutt., very common along Shekomeko creek and Roelif Jansen's Kill.

Xanthoxylum Americanum, Mill, very common.

Rhus copallina, L., common on Stissing Mt.

Rhamnus alnifolius, L'Her, deep swamps on Stissing Mt. L. catharticus, L., along Hemlock banks of Mud Pond.

Acer Pennsylvanicum, L., common on Stissing Mt. A. spicatum, Lam., common in ravines of Stissing Mt. and Mt. Ararat.

Tephrosia Virginiana, Pers., frequent on south part of Stissing Mt.

Melilotus officinalis, Willd., not uncommon along roadsides. M. alba, Lam., becoming common.

Lespedeza procumbens, Michx., common on our hills and mountains.

Coronilla varia, DC., well naturalized in one station, in fields.

Prunus pumila, L., frequent on Stissing Mt.—abundant on summit. P. Cerasus, L., thoroughly naturalized about here, in woods and on Stissing Mt.

Geum strictum, Ait, very common everywhere about here. G. rivale, L., frequent in our deep swamps.

Rubus strigosus, Michx., very common.

Rosa micrantha, Smith, and R. rubiginosa, L., both frequent. R. blanda, Ait, rather rare.

Potentilla tridentata, Ait., abundant on summit of Stissing Mt. P. arguta, Pursh., common on Stissing Mt. P. fruticosa, L., very common in all our marshes; over hundreds of acres densely covered with it.

Waldsteinia fragarioides, Tratt., abundant in certain ravines on Stissing Mt.

Cratægus tomentosa, L., common.

Ribes Cynosbati, L., common on Stissing Mt. and in adjoining woods. R. rubrum, L., common along creeks and cold woods. R. hirtellum, Michx., common in our cold swamps. R. floridum, L., is also common.

Mitella diphylla, L., common in all our woods.

Tiarella cordifolia, L., rare; stations, cold mountain woods and along springy banks of a small stream.

Circæa alpina, L., abundant in one or two deep woods.

Epilobium molle, Torr., frequent in our boggy marshes. E. palustre, L., rare.

Ludwigia alternifolia and Nesæa verticillata, H. B. K., are both rare with us.

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The Club meets regularly the last Tuesday of the month in the Herbarium, Columbia College, at 7½ P. M.

§ 128. Additions to the Bryology of the United States.

NO. IV.

Description of four new species of Musci from the Gulf States, by DR. KARL MÜELLER, Halle.

1. **Barbula** (senophyllum) **Jooriana**, C. Müll., *n. sp.*—Dioica; laxe cespitulosa amœne viridissima facillime emolliens igitur mollissime tenera, simplex vel ramulo infra pedicellum innovante brevissimo divisa; folia caulina parum crispula madore remotiuscula patula axin rufulum vix obtegentia, e basi semivaginante erectiore oblongata angusta pellucidiore lineari-lanceolata plus minus obtusata vel acutiora sed mucrone brevissimo terminata, nervo flavido crassiusculo canaliculato dorso scabriusculo excurrente basi fibrosa-decurrente exarata, margine infero solum paulisper revoluta, concava alis superioribus planiusculis integerrimis, cellulis parvis basi rectangularibus majoribus breviusculis angustis superne minute hexagonis valde chlorophyllosis mollissimis distinctis vix papillosis; perich. interiora perpauca erectiora e basi longius vaginata oblonga accuminata haud mucronata, theca in pedunculo brevi rubente strictiusculo erecta minuta oblonga, calyptra ubique fere tenuiter scabra, spiraliter cellulosa; peristomii dentes tenerrime capillares usque fere ad basin fissi, elongati rufuli asperuli.

Barbulæ unguiculatæ aliquantulum similis.

Patria. *Ludovicia.* In terra argillacea prope *Baton Rouge.*

Dr. *Joor* primum legit. Ex herb. C. Mohr.

2. **Dicranum** (*Campylopus*) **subleucogaster**, *n. sp.*—Dioicum; laxe cespitulosum pollicare sordide lutescens strictiusculum apice solum ob ramulos brevissimos dense congestos comam crispatulam crassiorem setosam parvam sistens; folia caulina inferiora minute erecto-conferta sed axin parum obtegentia, e basi longe flavidefibrosa plus minus latiuscula ovata dein acuminata, nervo applanato latissimo subulam canaliculatam latiusculam superne attenuatam et apice serrulatam strictiusculam constituente cellulis basilaribus laxioribus amplioribus pellucidis regulariter hexagonis paucis deinque quadratis minoribus firmis incrassatis lutescentibus alaribus multis laxissimis fuscidulis senectute emarcidis pellucidis in ventrem lævem congestis; perich. multo majora latiore basi vaginata vel convoluta laxissime amplissime reticulata subula-elongata flexuosa grossius serrulata coronata.—*D. leucogaster* differt caule magis flexuoso crassiore multo longius setoso, cellulis alaribus omnino albidis laxioribus, cæteris minoribus.

Patria. *Alabama*, Mobile, ad terram humidam argillosa-arenaceam, rarum. C. Mohr, leg. Mart., 1861:

3. **Hypnum** (*Bruchythecium*) **biventrosum**, C. Müll., *n. sp.*; Dioicum; laxe cespitulosum viridissimum *pusillum*, *ramis* simplicibus *tenuibus brevissimis* curvulis madore turgidiusculis strictis; *folia caulina* dense conferta humore erecto-patula, *parva e basi vix decurrente* latiuscula ovata longiuscule acuminata *perfecte symmetrica*, basi utrinque *nervi loco plicæ ventrem plus minus profundum sistentia*, nunquam plicas longitudinales sulcatas constituentia, *margine*

basilari solum late convexo, supremo interdum angustissimo *nusquam valde revoluto sed pro more erecto, ubique constanter distincte denticulato, nervo valde regulari viridissimo stricto* canaliculato supra medium evanido *nunquam flexuoso vel furcato, cellulis densis* linearibus brevibus, *alaribus paucis minutis massa chlorophyllosa repletis mollibus*; *perich. parva*, e basi vaginata laxe elongate reticulata, *plus minus subito in acumen* longiusculum capillare reflexum *protracta* superne hic illic dente grosso vel minori ornata enervia *eplicata*, externa minora e basi latiuscula ovata semivaginante subito reflexe acuminata denticulata, *nusquam margine revoluta*. Theca *in pedunculo brevi* lævi rubente spiraliter torta, erecta *minuta cylindrico-oblonga haud curvata*, operculo conico brevissimo obliquiusculo apiculato *non protuberante, annulo simplici obsoleto*; perist. *d. ext. breves angusti* rubiginosi linea longitudinali obsolete notati parum trabeculati, *interni* in membrana perbrevi lutea lævi positi, in crura duo capillaria fissi, ciliis *singulis rudimentariis*.—Ob inflorescentiam pedunculum glabrum et habitum *Hypno læto*, cujus formam veluti diminutam refert, simillimum, sed criteriis litteris cursivis accuratius designatis prorsus diversum, exiguitate et statura *Hypnum velutinum* in memoriam redigens.

Patria. Ludovicia. In sylvis umbrosis prope Baton Rouge, Dr. Joor legit. Vere, 1873. Ex. herb. C. Mohr.

4. **Neckera** (*Orthostichella*) **Ludoviciana**, C. Müll., *n. sp.*—Perpusilla, habitu et statura *Pilotricho cymbifolio* Sulliv. Floridano simillima, sed diversa: foliis indistincte spiraliter polystichis multo angustioribus minoribus longius et acutius acuminatis, indistincte denticulatis, nervo viridi, cellulis minoribus indistinctioribus mollioribus, alaribusque paucioribus minutissimis aureis ad alam infimam positis.

Patria. Ludovicia. Baton Rouge, ad truncos muscosos arborum Dr. Joor leg., 1873, Ex. herb. C. Mohr.

NO. V.

Bryum Mohrii, Lesquereux, *n. sp.*—Hermaphroditum? cæspitosum, *sordide lutescens, caulis fertilis brevissimus simplex vel innovante parce ramosus*; sterilis *simplex subpollicaris erectus* julaceus sed filiformis. *Folia appressa laxe subquadratim imbricata caulina et* perichætialia *e basi horizontali erecta lanceolata nervo valido percurrente acuta vel obtusiuscula; folia innovationum oblonga versus basim angustiora subdecurrentia, nervo valido viridi obtuse appiculata, carinato-concava, margine plana integra, basi cellulis parallelogrammis, superne polygono angustatis areolata*. Theca in pedicello elongato *pollicari et ultro vix flexuoso rubello horizontalis vel erecta angusta oblongo-cylindrica sub ore constricta*, operculo *conico obtuso umbonato sanguineo; annulo lato composito* peristomii interni dentibus fissis ciliis singulis binisve gracillimis appendiculatis interpositis.

To this description the author adds the following remarks:

"I could not distinctly see if this species is hermaphrodite. It is more probably diœcious, as the fragments found at the axils of the upper perich. leaves appear to be abortive archegonia rather than anthers. The species is allied to what Müller describes as *Bryum obconicom*, Hsch., and may be a variety of it. The specimens are, however, too few and incomplete for positive assertion."

Patria *Ludovicia.* In terra argillacea, lutosa ad ripas fluminis Mississippi prope Donaldsonville, C. Mohr leg. Mense Decembri, 1856.

The following tropical species, heretofore not observed in the United States, have been found by me in the Gulf region.

Barbula Crugeri, Sonders. Müll., Syn., vol. 1, p. 618.

Ludovicia. Ad ripas fluminis Mississippi in muris vetustis St. James Parish, capsulis deorperculatis. Mense, Decembri, 1870.

Trichostomum macrostegium, Sull. Musci Cubenses Wrightiani, 1861. *Ludovicia.* Donaldsonville, Bryo Mohrii associatum. Decembri, 1856.

Mnium (*Rhizogonium*) **spiniforme,** C. Müll., Syn., vol. 1, p. 175. *Alabama.* In sylvis opacis locis udis ad truncos prostratos valde putridos prope Cottage Hill, Mobile Co., Decembri, 1873, copiose et pulcherrime fructiferum.

Rhacopilum tomentosum. Brid.

Ludovicia. In sylvis opacis in truncis vetustis arborum frequens prope Donaldsonville; thecis maturis. Decembri, 1856.

C. Mohr, Mobile, Ala.

§ **129. Companion Plants.**—I.. H. H.'s observations in § 119, October Number of the Bulletin, will not hold good here; for Cephalanthus and Saururus, while often growing together, are more frequently found in different localities. As they affect similar situations, they would naturally grow in company at times; but the former is much the more common plant with us.

My experience is also diverse from that of Mr. Bower. I do not remember to have ever seen Schizæa pusilla and Lycopodium Carolinianum in company, though I have seen them in separate localities many times. The former is confined to the Pine-Barren region of New Jersey, while the latter extends along the Atlantic coast to Florida, and is even found at the Cape of Good Hope!—where, too, a species of Schizæa (*S. pectinata*, Thunb.) is also found. It would be curious if these keep company also; but different localities are given on the labels with my specimens.

Wilmington, Del. Wm. M. Canby.

[Lycopodium Carolinianum has often betrayed to us the lurking Schizæa.—Eds.]

§ **130. Insects destroyed by vegetables.**—The note (§ 116) about grasshoppers, in the October Bulletin, reminds me of the time when I spent years in looking after insects which suffered death either by imprisonment or by attacking plants to deposit eggs, etc. I found it common for the timber boring insects (Urocerata) to become fastened to the trunks of trees by their ovipositors. One year I found quite a number of the Sirex Columba, L., the Tremex of our times, thus fastened to Oaks, Elms, Pear trees, etc. I also found that our common Pond-lily (Nymphæa odorata) closed up, every now and then, confining insects of various sorts, and that, when the flower was mature, the straight scape would become spiral and draw flower and insects under water. The Gum Pink Catchfly [Silene antirrhina?] was visited, and the insects im-

prisoned by it catalogued and reported to Dr. Harris. Afterward I found that insects naturally feeble were oftentimes actually shut in by the growth of the plant; for instance, the Gall-flies (Cynips) or their progeny in the galls they caused, and feeble individuals of the Apple-tree Borer were sometimes unable to eat their way out of the trunk.

Natick, Mass. AUSTIN BACON.

§ 131. **Publications.**—1. *The American Naturalist* for December contains a study of *Imbricative Æstivation* by A. P. Morgan, a good example of a kind of work which we are glad to see getting more attention in this country. The two notes on *Yucca filamentosa* and *Apple flowers* are of a similar nature. The Naturalist always contains some instructive botanical matter, and deserves the support of botanists. It offers subscribers for the coming year the back volumes at a very low rate.—2. *A List of North American Lichens*, by Henry Willey, New Bedford, Mass., January, 1873, price twenty-five cents. This list is arranged according to Tuckerman's "Genera," and is a valuable exchange medium.—3. *The American Garden*, for December, contains with other good things a resumé of the recent investigations respecting insectivorous plants, with a plate comprising representations of seven of them.—4. Dr. Gray in the *Semi-weekly Tribune*, December 9, discusses the vitality of varieties.—5. Mr. Thomas Bland has presented to the Club, *Proceedings of the Scientific Association of Trinidad*, Parts VI. and VII., containing a catalogue of the plants in the Royal Botanical Gardens on that Island (about a thousand species), and other interesting botanical matter.—6. Mr. Bland has also presented the Third Annual Report of the Botanical Survey of Southwest and Northwest Louisiana, made during the year 1871, by Prof. A. Featherman, of the Louisiana State University. A map accompanies it.

§ 132. **Spotted Clover.**—My cousin, Mr. Richard A. Bailey, called my attention the other day to a plant of red clover, *Trifolium pratense*, L., in which the leaflets, instead of the usual pale mark, have deep, brownish, black spots upon them. The plant continues to produce these, and has been removed to a conservatory by its discoverer. W. W. BAILEY.

§ 133. **New Stations.**—Rev. H. Wibbe reports finding *Sedum reflexum*, L., last Spring, near Sandlake, N. Y.—Dr. Howe reports *Centaurea nigra*, L., well established in Yonkers, found by R. Kersting.—Mrs. Cora H. Clark, of Jamaica Plain, Mass., reports having found *Paronychia argyrocoma*, Nutt., on the top of White Cap, a small mountain near Andover, Me.

§ 134. **Constitution and By-Laws.**—Copies may be procured by sending twenty-five cents to Mr. I. H. Hall, 36 Pine Street, N. Y.

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